



**1999  
AMENDMENTS  
to the  
Program of Studies: Career and Technology Studies  
Junior and Senior High Schools**

1. **Replace** Career and Technology Studies pages 1 to 8 with **revised** pages 1 to 8.
2. **Replace** Career Transitions pages 9 to 21 with **revised** pages 9 to 24.
3. **Replace** Communication Technology pages 9 to 31 with **revised** pages 9 to 31.
4. **Replace** Forestry pages 9 to 24 with **revised** pages 9 to 24.
5. **Replace** Information Processing pages 9 to 38 with **revised** pages 9 to 38.
6. **Replace** Management and Marketing pages 9 to 27 with **revised** pages 9 to 28.

LC  
1037.8  
C22  
A3  
C37  
1999  
amend.

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# CAREER AND TECHNOLOGY STUDIES

## A. PROGRAM RATIONALE AND PHILOSOPHY

Through Career and Technology Studies (CTS), secondary education in Alberta is responding to the many challenges of modern society, helping young people develop daily living skills and nurturing a flexible, well-qualified work force.

In Canada's information society, characterized by rapid change in the social and economic environment, students must be confident in their ability to respond to change and successfully meet the challenges they face in their own personal and work lives. In particular, they make decisions about what they will do when they finish high school. Many students will enter the work force, others will continue their education. All students face the challenges of growing independence and responsibility, and of entering post-secondary programs and/or the highly competitive workplace.

Secondary schools also face challenges. They must deliver, on a consistent basis, high quality, cost-effective programs that students, parents and the community find credible and relevant.

CTS helps schools and students meet these challenges. Schools can respond more efficiently and effectively to student and community needs and expectations by taking advantage of the opportunities in the CTS curriculum to design courses and access school, community and distance learning resources. Students can develop the confidence they need as they move into adult roles by assuming increased responsibility for their

learning; cultivating their individual talents, interests and abilities; and by defining and acting on their goals.

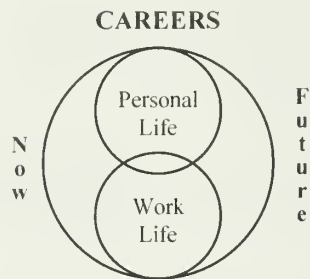
As an important component of education in Alberta secondary schools, CTS promotes student achievement by setting clear expectations and recognizing student success. Students in CTS develop competencies—the knowledge, skills and attitudes they are expected to demonstrate, that is, what they know and what they are able to do.

Acquired competencies can be applied now and in the future as students make a smooth transition into adult roles in the family, community, workplace and/or further education. To facilitate this transition, clearly stated expectations and standards have been defined in cooperation with teachers, business and industry representatives and post-secondary educators.

CTS offers all students important learning opportunities. Regardless of the particular area of study chosen, *students in CTS will:*

- develop skills that can be applied in their daily lives, now and in the future
- refine career-planning skills
- develop technology-related skills
- enhance employability skills
- apply and reinforce learnings developed in other subject areas.

In CTS, students build skills they can apply in their everyday lives. For example, in the CTS program, particularly at the introductory levels, students have the opportunity to improve their ability to make sound consumer decisions and to appreciate environmental and safety precautions.

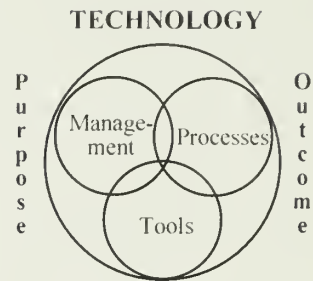


A career encompasses more than activities just related to a person's job or occupation; it involves one's personal life in both local and global contexts; e.g., as a family member, a friend, a community volunteer, a citizen of the world.

The integration of careers throughout the CTS program helps students to make effective career decisions and to target their efforts. CTS students will have the opportunity to expand their knowledge about careers, occupations and job opportunities, as well as the education and/or training requirements involved. Also, students come to recognize the need for lifelong learning.

Students in CTS have the opportunity to use and apply technology and systems effectively and efficiently. This involves:

- a decision regarding which processes and procedures best suit the task at hand
- the appropriate selection and skilled use of the tools and/or resources available
- an assessment of and management of the impact the use of the technology may have on themselves, on others and on the environment.



Integrated throughout CTS are employability skills, those basic competencies that help students develop their personal management and social skills. Personal management skills are improved as students take increased responsibility for their learning, design innovative solutions to problems and challenges, and manage resources effectively and efficiently. Social skills improve through learning experiences that require students to work effectively with others, demonstrate teamwork and leadership, and maintain high standards in safety and accountability.

As well as honing employability skills, CTS reinforces and enhances learnings developed in core and other optional courses. The curriculum emphasizes, as appropriate, the effective application of communication and numeracy skills.

In addition to the common outcomes described above, students focusing on a particular area of study will develop career-specific competencies that support entry into the workplace and/or related post-secondary programs. Career-specific competencies can involve understanding and applying appropriate terminology, processes and technologies related to a specific career, occupation or job.



## PROGRAM OUTCOMES

The program outcomes describe the basic competencies integrated throughout the CTS program.

Within an applied context relevant to personal goals, aptitudes and abilities; *the student* in CTS *will*:

- demonstrate the basic knowledge, skills and attitudes necessary for achievement and fulfillment in personal life
- develop an action plan that relates personal interests, abilities and aptitudes to career opportunities and requirements
- use technology effectively to link and apply appropriate tools, management and processes to produce a desired outcome
- develop basic competencies (employability skills), by:
  - selecting relevant, goal-related activities, ranking them in order of importance, allocating necessary time, and preparing and following schedules (managing learning)
  - linking theory and practice, using resources, tools, technology and processes responsibly and efficiently (managing resources)
  - applying effective and innovative decision-making and problem-solving strategies in the design, production, marketing and consumption of goods and services (problem solving and innovation)
  - demonstrating appropriate written and verbal skills, such as composition, summarization and presentation (communicating effectively)
  - participating as a team member by working cooperatively with others and contributing to the group with ideas, suggestions and effort (working with others)

- maintaining high standards of ethics, diligence, attendance and punctuality, following safe procedures consistently, and recognizing and eliminating potential hazards (demonstrating responsibility).

## PROGRAM ORGANIZATION

### CURRICULUM STRUCTURE

Career and Technology Studies is organized into **strands** and **courses**.

**Strands** in CTS define competencies that help students:

- build daily living skills
- investigate career options
- use technology (managing, processes, tools) effectively and efficiently
- prepare for entry into the workplace and/or related post-secondary programs.

In general, strands relate to selected industry sectors offering positive occupational opportunities for students. Some occupational opportunities require further education after high school, and some allow direct entry into the workplace. Industry sectors encompass goods-producing industries, such as agriculture, manufacturing and construction; and service-producing industries, such as business, health, finance and insurance.

**Courses** are the building blocks for each strand. They define what a student is expected to know and be able to do (exit-level *competencies*). Courses also specify prerequisites. Recommendations for course parameters, such as instructional qualifications, facilities and equipment can be found in the guides to implementation.

The competencies a student must demonstrate to achieve success in a course are defined through *general outcomes*. Senior high school students who can demonstrate the general outcomes defined for a CTS course; i.e., who have the designated competencies, will qualify for 1 credit toward their high school diploma.

*Specific outcomes* provide a more detailed framework for instruction. Within the context of the general outcomes, the specific outcomes further define the knowledge, skills and attitudes the student should acquire.

The following chart shows the 22 strands that comprise the CTS program and the number of 1-credit courses available in each strand.

Strand	No. of Courses
1. Agriculture	33
2. Career Transitions	31
3. Communication Technology	33
4. Community Health	31
5. Construction Technologies	46
6. Cosmetology Studies	58
7. Design Studies	31
8. Electro-Technologies	37
9. Energy and Mines	26
10. Enterprise and Innovation	8
11. Fabrication Studies	41
12. Fashion Studies	29
13. Financial Management	14
14. Foods	37
15. Forestry	21
16. Information Processing	48
17. Legal Studies	13
18. Logistics	12
19. Management and Marketing	20
20. Mechanics	54
21. Tourism Studies	24
22. Wildlife	17

## LEVELS OF ACHIEVEMENT

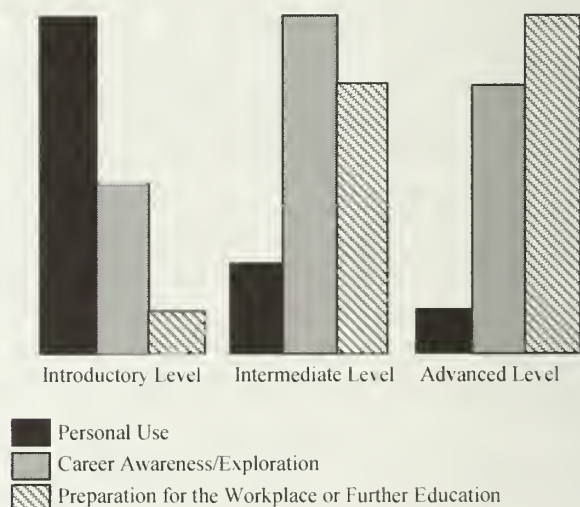
Courses are organized into three levels of achievement: **introductory**, **intermediate** and **advanced**. As students progress through the levels, they will be expected to meet higher standards and demonstrate an increased degree of competence, in both the program outcomes and the general outcomes defined for individual courses.

**Introductory** level courses help students build daily living skills and form the basis for further learning. Introductory courses are for students who have no previous experience in the strand.

**Intermediate** level courses build on the competencies developed at the introductory level. They provide a broader perspective, helping students recognize the wide range of related career opportunities available within the strand.

**Advanced** level courses refine expertise and help prepare students for entry into the workplace or a related post-secondary program.

The graph below illustrates the relative emphasis on the aspects of career planning at each of the levels.





## CURRICULUM AND ASSESSMENT STANDARDS

**Curriculum standards** in CTS define what students must know and be able to do. Curriculum standards are expressed through the program outcomes for CTS, and through general and specific outcomes defined for individual courses within each strand.

**Assessment standards** define how student performance is to be judged. In CTS, each assessment standard defines the conditions and criteria to be used for assessing the competencies associated with each general outcome. To receive credit for a course, students must demonstrate competency at the level specified by the conditions and criteria defined for each general outcome.

Students throughout the province receive a fair and reliable assessment as they use the standards to guide their efforts, thus ensuring they participate more effectively and successfully in the learning and assessment process. Standards at advanced levels are, as much as possible, linked to workplace and post-secondary entry-level requirements.

## TYPES OF COMPETENCIES

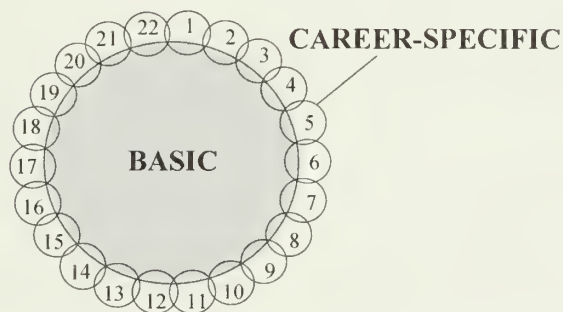
Two types of competencies are defined within the CTS program: basic and career-specific.

**Basic** competencies are generic to any career area and are developed within each course. Basic competencies include:

- personal management; e.g., managing learning, being innovative, ethics, managing resources
- social; e.g., communication, teamwork, leadership and service, demonstrating responsibility (safety and accountability).

**Career-specific** competencies relate to a particular strand. These competencies build daily living skills at the introductory levels and support the smooth transition to the workplace and/or post-secondary programs at the intermediate and advanced levels.

The model below shows the relationship of the two types of competencies within the 22 strands of the CTS program.















## BASIC COMPETENCIES REFERENCE GUIDE

The chart below outlines basic competencies that students endeavour to develop and enhance in each of the CTS strands and courses. Students' basic competencies should be assessed through observations involving the student, teacher(s), peers and others as they complete the requirements for each course. In general, there is a progression of task complexity and student initiative as outlined in the Developmental Framework★. As students progress through Stages 1, 2, 3 and 4 of this reference guide, they build on the competencies gained in earlier stages. Students leaving high school should set themselves a goal of being able to demonstrate Stage 3 performance.

*Suggested strategies for classroom use include:*

- having students rate themselves and each other
- using in reflective conversation between teacher and student
- highlighting areas of strength
- tracking growth in various CTS strands
- highlighting areas upon which to focus
- maintaining a student portfolio.

Stage 1— The student:	Stage 2— The student:	Stage 3— The student:	Stage 4— The student:
<b>Managing Learning</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> comes to class prepared for learning</li> <li><input type="checkbox"/> follows basic instructions, as directed</li> <li><input type="checkbox"/> acquires specialized knowledge, skills and attitudes</li> <li><input type="checkbox"/> identifies criteria for evaluating choices and making decisions</li> <li><input type="checkbox"/> uses a variety of learning strategies</li> </ul>	 <ul style="list-style-type: none"> <li><input type="checkbox"/> follows instructions, with limited direction</li> <li><input type="checkbox"/> sets goals and establishes steps to achieve them, with direction</li> <li><input type="checkbox"/> applies specialized knowledge, skills and attitudes in practical situations</li> <li><input type="checkbox"/> identifies and applies a range of effective strategies for solving problems and making decisions</li> <li><input type="checkbox"/> explores and uses a variety of learning strategies, with limited direction</li> </ul>	 <ul style="list-style-type: none"> <li><input type="checkbox"/> follows detailed instructions on an independent basis</li> <li><input type="checkbox"/> sets clear goals and establishes steps to achieve them</li> <li><input type="checkbox"/> transfers and applies specialized knowledge, skills and attitudes in a variety of situations</li> <li><input type="checkbox"/> uses a range of critical thinking skills to evaluate situations, solve problems and make decisions</li> <li><input type="checkbox"/> selects and uses effective learning strategies</li> <li><input type="checkbox"/> cooperates with others in the effective use of learning strategies</li> </ul>	 <ul style="list-style-type: none"> <li><input type="checkbox"/> demonstrates self-direction in learning, goal setting and goal achievement</li> <li><input type="checkbox"/> transfers and applies learning in new situations; demonstrates commitment to lifelong learning</li> <li><input type="checkbox"/> thinks critically and acts logically to evaluate situations, solve problems and make decisions</li> <li><input type="checkbox"/> provides leadership in the effective use of learning strategies</li> </ul>
<b>Managing Resources</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> adheres to established timelines; uses time/schedules/planners effectively</li> <li><input type="checkbox"/> uses information (material and human resources), as directed</li> <li><input type="checkbox"/> uses technology (facilities, equipment, supplies), as directed, to perform a task or provide a service</li> <li><input type="checkbox"/> maintains, stores and/or disposes of equipment and materials, as directed</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> creates and adheres to timelines, with limited direction; uses time/schedules/planners effectively</li> <li><input type="checkbox"/> accesses and uses a range of relevant information (material and human resources), with limited direction</li> <li><input type="checkbox"/> uses technology (facilities, equipment, supplies), as appropriate, to perform a task or provide a service, with minimal assistance and supervision</li> <li><input type="checkbox"/> maintains, stores and/or disposes of equipment and materials, with limited assistance</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> creates and adheres to detailed timelines on an independent basis; prioritizes task; uses time/schedules/planners effectively</li> <li><input type="checkbox"/> accesses a range of information (material and human resources), and recognizes when additional resources are required</li> <li><input type="checkbox"/> selects and uses appropriate technology (facilities, equipment, supplies) to perform a task or provide a service on an independent basis</li> <li><input type="checkbox"/> maintains, stores and/or disposes of equipment and materials on an independent basis</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> creates and adheres to detailed timelines; uses time/schedules/planners effectively; prioritizes tasks on a consistent basis</li> <li><input type="checkbox"/> uses a wide range of information (material and human resources) in order to support and enhance the basic requirement</li> <li><input type="checkbox"/> recognizes the monetary and intrinsic value of managing technology (facilities, equipment, supplies)</li> <li><input type="checkbox"/> demonstrates effective techniques for managing facilities, equipment and supplies</li> </ul>
<b>Problem Solving and Innovation</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> participates in problem solving as a process</li> <li><input type="checkbox"/> learns a range of problem-solving skills and approaches</li> <li><input type="checkbox"/> practices problem-solving skills by responding appropriately to a clearly defined problem, specified goals and constraints, by: <ul style="list-style-type: none"> <li>– generating alternatives</li> <li>– evaluating alternatives</li> <li>– selecting appropriate alternative(s)</li> <li>– taking action</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> identifies the problem and selects an appropriate problem-solving approach, responding appropriately to specified goals and constraints</li> <li><input type="checkbox"/> applies problem-solving skills to a directed or a self-directed activity, by: <ul style="list-style-type: none"> <li>– generating alternatives</li> <li>– evaluating alternatives</li> <li>– selecting appropriate alternative(s)</li> <li>– taking action</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> thinks critically and acts logically in the context of problem solving</li> <li><input type="checkbox"/> transfers problem-solving skills to real-life situations, by generating new possibilities</li> <li><input type="checkbox"/> prepares implementation plans</li> <li><input type="checkbox"/> recognizes risks</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> identifies and resolves problems efficiently and effectively</li> <li><input type="checkbox"/> identifies and suggests new ideas to get the job done creatively, by: <ul style="list-style-type: none"> <li>– combining ideas or information in new ways</li> <li>– making connections among seemingly unrelated ideas</li> <li>– seeking out opportunities in an active manner</li> </ul> </li> </ul>

Stage 1— <i>The student:</i>	Stage 2— <i>The student:</i>	Stage 3— <i>The student:</i>	Stage 4— <i>The student:</i>
<b>Communicating Effectively</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> uses communication skills; e.g., reading, writing, illustrating, speaking</li> <li><input type="checkbox"/> uses language in appropriate context</li> <li><input type="checkbox"/> listens to understand and learn</li> <li><input type="checkbox"/> demonstrates positive interpersonal skills in selected contexts</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> communicates thoughts, feelings and ideas to justify or challenge a position, using written, oral and/or visual means</li> <li><input type="checkbox"/> uses technical language appropriately</li> <li><input type="checkbox"/> listens and responds to understand and learn</li> <li><input type="checkbox"/> demonstrates positive interpersonal skills in many contexts</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> prepares and effectively presents accurate, concise, written, visual and/or oral reports providing reasoned arguments</li> <li><input type="checkbox"/> encourages, persuades, convinces or otherwise motivates individuals</li> <li><input type="checkbox"/> listens and responds to understand, learn and teach</li> <li><input type="checkbox"/> demonstrates positive interpersonal skills in most contexts</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> negotiates effectively, by working toward an agreement that may involve exchanging specific resources or resolving divergent interests</li> <li><input type="checkbox"/> negotiates and works toward a consensus</li> <li><input type="checkbox"/> listens and responds to understand, learn, teach and evaluate</li> <li><input type="checkbox"/> promotes positive interpersonal skills among others</li> </ul>
<b>Working with Others</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> fulfills responsibility in a group project</li> <li><input type="checkbox"/> works collaboratively in structured situations with peer members</li> <li><input type="checkbox"/> acknowledges the opinions and contributions of others in the group</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> cooperates to achieve group results</li> <li><input type="checkbox"/> maintains a balance between speaking, listening and responding in group discussions</li> <li><input type="checkbox"/> respects the feelings and views of others</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> seeks a team approach, as appropriate, based on group needs and benefits; e.g., idea potential, variety of strengths, sharing of workload</li> <li><input type="checkbox"/> works in a team or group: <ul style="list-style-type: none"> <li>– encourages and supports team members</li> <li>– helps others in a positive manner</li> <li>– provides leadership/followership as required</li> <li>– negotiates and works toward consensus as required</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> leads, where appropriate, mobilizing the group for high performance</li> <li><input type="checkbox"/> understands and works within the context of the group</li> <li><input type="checkbox"/> prepares, validates and implements plans that reveal new possibilities</li> </ul>
<b>Demonstrating Responsibility</b> <p><b>Attendance</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> demonstrates responsibility in attendance, punctuality and task completion</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> follows personal and environmental health and safety procedures</li> <li><input type="checkbox"/> identifies immediate hazards and their impact on self, others and the environment</li> <li><input type="checkbox"/> follows appropriate/emergency response procedures</li> </ul> <p><b>Ethics</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> makes personal judgements about whether or not certain behaviours/actions are right or wrong</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> recognizes and follows personal and environmental health and safety procedures</li> <li><input type="checkbox"/> identifies immediate and potential hazards and their impact on self, others and the environment</li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> assesses how personal judgements affect other peer members and/or family; e.g., home and school</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> establishes and follows personal and environmental health and safety procedures</li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> assesses the implications of personal/group actions within the broader community; e.g., workplace</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> transfers and applies personal and environmental health and safety procedures to a variety of environments and situations</li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> demonstrates accountability for actions taken to address immediate and potential hazards</li> <li><input type="checkbox"/> analyzes the implications of personal/group actions within the global context</li> <li><input type="checkbox"/> states and defends a personal code of ethics as required</li> </ul>

<b>★ Developmental Framework</b> <ul style="list-style-type: none"> <li>• Simple task</li> <li>• Structured environment</li> <li>• Directed learning</li> </ul>	<ul style="list-style-type: none"> <li>• Task with limited variables</li> <li>• Less structured environment</li> <li>• Limited direction</li> </ul>	<ul style="list-style-type: none"> <li>• Task with multiple variables</li> <li>• Flexible environment</li> <li>• Self-directed learning, seeking assistance as required</li> </ul>	<ul style="list-style-type: none"> <li>• Complex task</li> <li>• Open environment</li> <li>• Self-directed/self-motivated</li> </ul>
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# CAREER TRANSITIONS

## B. STRAND RATIONALE AND PHILOSOPHY

Career Transitions, a strand in Career and Technology Studies, focuses on helping students recognize the relevance of schooling and to make a smooth transition from secondary school to the world of work or to further training and/or education. Key themes include Career Readiness, Leadership, Career Extensions, Career Credentials, Job Safety Skills and Client Service.

Career Transitions has the potential to create meaningful educational experiences for today's high school students. It supports integration across curricular areas and partnerships in which students, schools, businesses and the community can work together toward common goals.

Each Career Transitions course promotes the development of independent thinking and decision-making skills. As well, the courses encourage the abilities and flexibility required to adapt to new situations, including the pursuit of career advancement opportunities and changes in career paths. Career Transitions also helps students recognize the relevance, transferability and applicability of competencies they have developed in other courses and through hobbies, interests or work.

Students participating in Career Transitions are encouraged to set realistic career goals and to increase their motivation to succeed in courses that are related to these goals. Career Transitions

helps students determine what employers and others expect of prospective employees, and encourages students to actively work to meet their own and others' expectations. Contact with role models in the work setting can provide accurate information about the training and pretraining requirements of occupations and the availability and use of up-to-date technology.

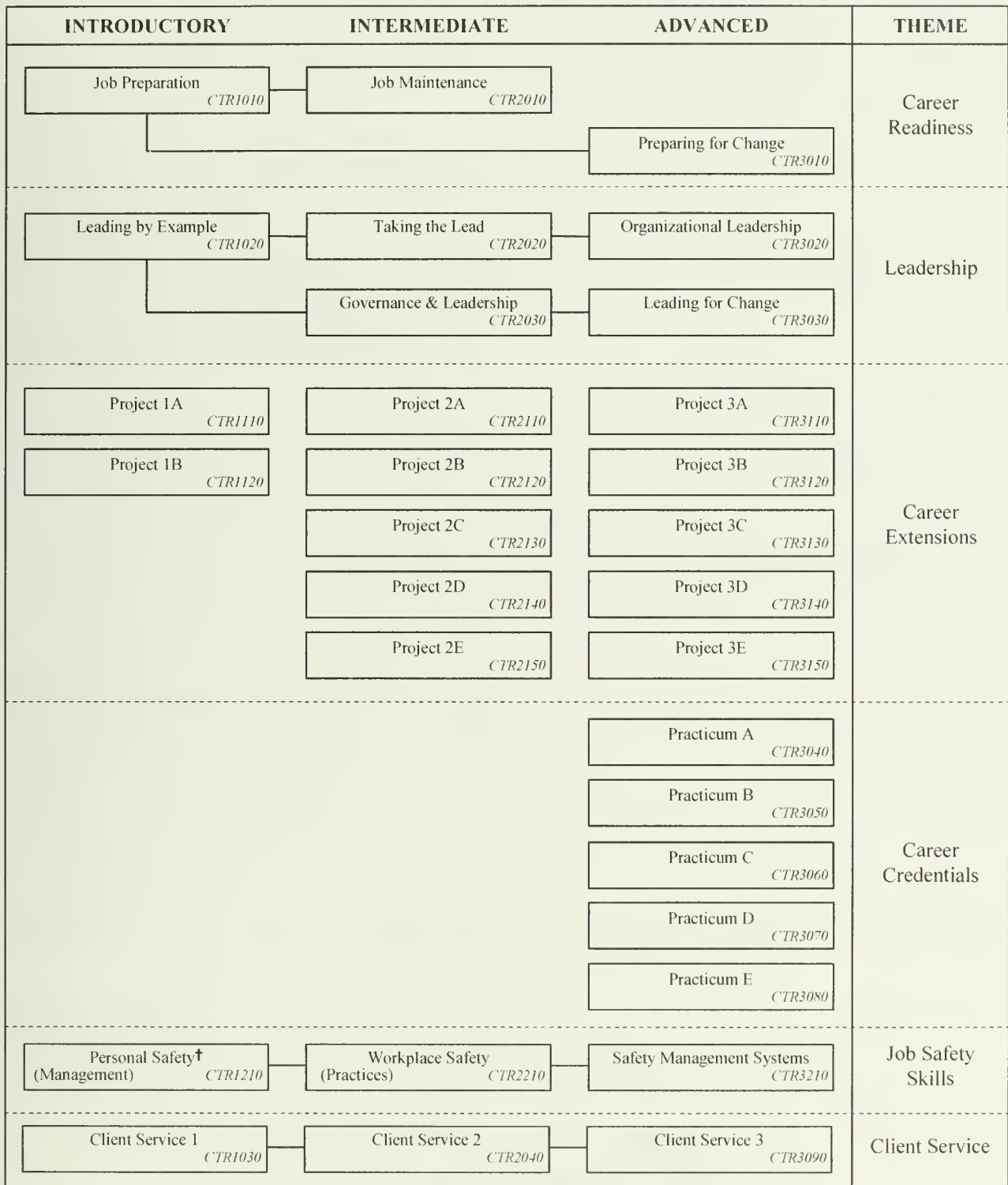
Within the philosophy of Career and Technology Studies, *students* in Career Transitions *will*:

- analyze the job market and societal trends, and relate them to personal career plans
- explore selected occupations in depth
- demonstrate successful job search, job acquisition and maintenance skills
- understand the concept of job termination
- develop acceptable work habits and positive attitudes toward work
- identify and discuss the expectations and the rights and responsibilities of employers and employees
- recognize and develop a positive attitude toward safety and safe workplace practices



- identify and understand legislation and regulations that govern employers and employees
- understand the relationships among the individual worker, the employer, organized labour and the government
- recognize and develop leadership and client service skills
- apply leadership and client service theory and skills in a variety of contexts
- explore the relationship between education, training and career advancement
- develop and demonstrate project management skills
- make a smooth transition between schooling and the world of work
- attain externally recognized credentials, where available.

## SCOPE AND SEQUENCE



—— Prerequisite

† Course is also offered in Community Health.



## GENERAL OUTCOMES: INTRODUCTORY LEVEL

### COURSE CTR1010: JOB PREPARATION

**Level:** Introductory

**Theme:** Career Readiness

**Prerequisite:** None

**Description:** Students develop successful employment search skills and a personal employment search portfolio.

**General Outcomes:** *The student will:*

- identify and develop knowledge, skills and attitudes appropriate for conducting successful employment searches
- communicate in the language in which business is conducted
- prepare a personal employment search portfolio
- use technologies, tools and information systems appropriately for job preparation
- demonstrate basic competencies.

### COURSE CTR1020: LEADING BY EXAMPLE

**Level:** Introductory

**Theme:** Leadership

**Prerequisite:** None

**Description:** Students develop awareness of the principles and practices of leadership and develop, implement and assess a personal leadership plan.

**General Outcomes:** *The student will:*

- define concepts, terms and practices relating to leadership
- develop a plan to demonstrate leadership by example behaviours
- demonstrate leadership abilities as outlined in the plan
- demonstrate basic competencies.

**COURSE CTR1030: CLIENT SERVICE 1**

**Level:** Introductory

**Theme:** Client Service

**Prerequisite:** None

**Description:** Students are introduced to the principles and practices of client service. The learning acquired through other CTS courses is extended and enhanced, and opportunities are provided for students to apply and to integrate, in real-life contexts, the knowledge, skills and attitudes developed through other courses.

The context of instruction for this course is determined by the other CTS strands to which it is linked.

**General Outcomes:** *The student will:*

- define “client service” and explain the relationship between “client” and “service”
- identify and describe the scope of client services available to clients
- demonstrate and record basic client services, including:
  - applications of competencies learned in other courses
  - communication skills
  - safety practices
- demonstrate basic competencies.

**COURSE CTR1110: PROJECT 1A****COURSE CTR1120: PROJECT 1B**

**Level:** Introductory

**Theme:** Career Extensions

**Prerequisite:** None

**Description:** Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant.

**General Outcomes:** *The student will:*

- propose, manage and assess a project
- meet goals as defined within the project plan
- demonstrate basic competencies.



## **COURSE CTR1210: PERSONAL SAFETY (MANAGEMENT)**

**Level:** Introductory

**Theme:** Job Safety Skills

**Prerequisite:** None

**Description:** Students develop practical safety-related knowledge, skills and attitudes, and obtain certification in emergency first aid.

**General Outcomes:** *The student will:*

- identify and describe:
  - health and safety stakeholders
  - legislation relating to health and safety
  - hazards; e.g., in offices
  - careers in safety
- demonstrate basic health and safety practices, including:
  - burn prevention
  - use of personal protective equipment (PPE)
  - back care
- develop and implement a personal health and safety plan
- complete, successfully, a course in emergency first aid (EFA)
- demonstrate basic competencies.



## GENERAL OUTCOMES: INTERMEDIATE LEVEL

### COURSE CTR2010: JOB MAINTENANCE

**Level:** Intermediate

**Theme:** Career Readiness

**Prerequisite:** CTR1010 Job Preparation

**Description:** Students acquire knowledge about workplace requirements, rights and responsibilities and relate this knowledge to personal career/employment expectations.

**General Outcomes:** *The student will:*

- identify and develop knowledge, skills and attitudes appropriate to acquiring and maintaining employment
- identify and describe employment support agencies, employment centres and employment legislation
- demonstrate basic competencies.

### COURSE CTR2020: TAKING THE LEAD

**Level:** Intermediate

**Theme:** Leadership

**Prerequisite:** CTR1020 Leading by Example

**Description:** Students compare basic theories and styles of leadership, and demonstrate leadership in a school, workplace or community context.

**General Outcomes:** *The student will:*

- compare theories and styles of leadership
- demonstrate the ability to lead others
- demonstrate basic competencies.

## **COURSE CTR2030: GOVERNANCE & LEADERSHIP**

**Level:** Intermediate

**Theme:** Leadership

**Prerequisite:** CTR1020 Leading by Example

**Description:** Students are introduced to governance, its place within the administrative structure of a school or community, including the roles, responsibilities, practices and procedures for participating in governance and leadership.

**General Outcomes:** *The student will:*

- describe and explain the purpose of a governance structure
- participate in leadership activities within a school, volunteer agency or a community governance structure
- demonstrate leadership in a governance role
- demonstrate basic competencies.

## **COURSE CTR2040: CLIENT SERVICE 2**

**Level:** Intermediate

**Theme:** Client Service

**Prerequisite:** CTR1030 Client Service 1

**Description:** Students expand on the principles and practices of client service previously developed. The learning acquired by students in CTR1030 Client Service 1 is extended and enhanced, and additional opportunities are provided for students to develop client service abilities by applying and integrating, in real-life contexts, the knowledge, skills and attitudes developed through other courses.

The context of instruction for this course is determined by the other CTS strands to which it is linked.

**General Outcomes:** *The student will:*

- distinguish between client needs and wants and be able to reconcile expressed needs with service needs
- demonstrate and record advanced client services, including:
  - applications of competencies learned in other courses
  - ethical behaviour
  - sales ability
  - quality control
  - marketing
  - client service management
- identify, explain and apply basic quality control principles and practices
- identify, explain and apply basic sales and marketing strategies
- demonstrate basic competencies.



**COURSE CTR2110: PROJECT 2A**  
**COURSE CTR2120: PROJECT 2B**  
**COURSE CTR2130: PROJECT 2C**  
**COURSE CTR2140: PROJECT 2D**  
**COURSE CTR2150: PROJECT 2E**

**Level:** Intermediate

**Theme:** Career Extensions

**Prerequisite:** None

**Description:** Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant.

**General Outcomes:** *The student will:*

- propose, manage and assess a project
- meet goals as defined within the project plan
- demonstrate basic competencies.

**COURSE CTR2210: WORKPLACE SAFETY (PRACTICES)**

**Level:** Intermediate

**Theme:** Job Safety Skills

**Prerequisite:** CTR1210 Personal Safety (Management)

**Description:** Students explore workplace safety principles and practices, and apply these principles and practices to a variety of contexts.

**General Outcomes:** *The student will:*

- identify and describe hazard assessments and controls
- classify accidents and incidents and explain causation
- define ergonomics and describe its relationship to workplace safety
- demonstrate and describe standards/legislated practices associated with workplace safety, including:
  - farm/urban safety
  - fire safety
  - electrical safety
  - confined space safety
  - transportation of dangerous goods
- demonstrate basic competencies.

## GENERAL OUTCOMES: ADVANCED LEVEL

### COURSE CTR3010: PREPARING FOR CHANGE

**Level:** Advanced

**Theme:** Career Readiness

**Prerequisite:** CTR1010 Job Preparation

**Description:** Students develop knowledge and skills relating to the changing labour market, and relate these changes to analyzing and refining personal career plans.

**General Outcomes:** *The student will:*

- analyze the role of government and labour unions in relation to employers and employees
- gather and analyze appropriate labour market information related to selected occupations and incorporate the findings into a personal career plan
- demonstrate basic competencies.

### COURSE CTR3020: ORGANIZATIONAL LEADERSHIP

**Level:** Advanced

**Theme:** Leadership

**Prerequisite:** CTR2020 Taking the Lead

**Description:** Students develop an understanding of the concept of organizations, and demonstrate leadership by establishing an organization and leading it to achieve a stated goal.

**General Outcomes:** *The student will:*

- explain the similarities and differences between leadership practices and management practices
- demonstrate leadership by establishing an organization, leading it to achieve a stated goal, and assessing the process and outcome
- demonstrate basic competencies.

**COURSE CTR3030: LEADING FOR CHANGE**

**Level:** Advanced

**Theme:** Leadership

**Prerequisite:** CTR2030 Governance & Leadership

**Description:** Students investigate change and decision-making processes used in the school and/or community. They construct, propose and initiate the use of a project planning model to affect change.

**General Outcomes:** *The student will:*

- describe the change and decision-making processes used in a governance structure
- identify and record the organizational structures used in a school and in a community
- construct, propose and initiate the use of a project planning model
- demonstrate basic competencies.

**COURSE CTR3040: PRACTICUM A**

**COURSE CTR3050: PRACTICUM B**

**COURSE CTR3060: PRACTICUM C**

**COURSE CTR3070: PRACTICUM D**

**COURSE CTR3080: PRACTICUM E**

**Level:** Advanced

**Theme:** Career Credentials

**Prerequisite:** None

**Description:** Students, on the worksite, continue to develop and refine those competencies developed in related Career and Technology Studies courses, previous practicums and other experiences.

**General Outcomes:** *The student will:*

- perform assigned tasks and responsibilities efficiently and effectively as required by the credentialling agency
- analyze personal performance in relation to established standards
- demonstrate basic competencies.

## **COURSE CTR3090: CLIENT SERVICE 3**

**Level:** Advanced

**Theme:** Client Service

**Prerequisite:** CTR2040 Client Service 2

**Description:** Students build on the principles and practices of client service acquired in CTR2040 Client Service 2. Additional opportunities are provided for students to apply and to integrate, in real-life contexts, the knowledge, skills and attitudes developed through other courses.

The context of instruction for this course is determined by the other CTS strands to which it is linked.

**General Outcomes:** *The student will:*

- demonstrate and record professional client services, including:
  - applications of competencies learned in other courses
  - ethical behaviour
  - client service enhancement strategies
- demonstrate advanced quality control and marketing strategies
- manage client services
- demonstrate basic competencies.

**COURSE CTR3110: PROJECT 3A**

**COURSE CTR3120: PROJECT 3B**

**COURSE CTR3130: PROJECT 3C**

**COURSE CTR3140: PROJECT 3D**

**COURSE CTR3150: PROJECT 3E**

**Level:** Advanced

**Theme:** Career Extensions

**Prerequisite:** None

**Description:** Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant.

**General Outcomes:** *The student will:*

- propose, manage and assess a project
- meet goals as defined within the project plan
- demonstrate basic competencies.

## **COURSE CTR3210: SAFETY MANAGEMENT SYSTEMS**

**Level:** Advanced

**Theme:** Job Safety Skills

**Prerequisite:** CTR2210 Workplace Safety (Practices)

**Description:** Students conduct an in-depth investigation of safety management systems and demonstrate the ability to design a safety program for a selected business/industry.

**General Outcomes:** *The student will:*

- define “loss control” and describe “loss control” practices in a selected business/industry
- design a safety program for a selected business/industry, and specify safety management practices, standards and documentation requirements/procedures
- gather and analyze accident/incident information, identify causation and recommend preventive measures
- demonstrate basic competencies.



# COMMUNICATION TECHNOLOGY

## B. STRAND RATIONALE AND PHILOSOPHY

In an information society characterized by rapid change in the social, economic and technological environments, students must be prepared to use information and technology effectively and efficiently. Communication Technology, a strand in Career and Technology Studies, helps students develop a broad awareness of the impact that presentation and communication, print, photography, and media design and application make in every aspect of their lives.

The knowledge and skills acquired from studying Communication Technology are transferable throughout the core and optional curricula, giving students an edge in presenting their views and ideas, in understanding others and in completing projects.

For example, a student may no longer be restricted to doing an essay or preparing a written report as part of a course requirement. Instead, the student may use any combination of Communication Technology skills to complete an assignment. On a more personal level, the student may apply these skills in everyday activities.

Finally, as the communications industry becomes more and more sophisticated, and as the merging of the different communication technologies continues to evolve, it is imperative that students improve their level of media and technological literacy in order to cope with their daily chores.

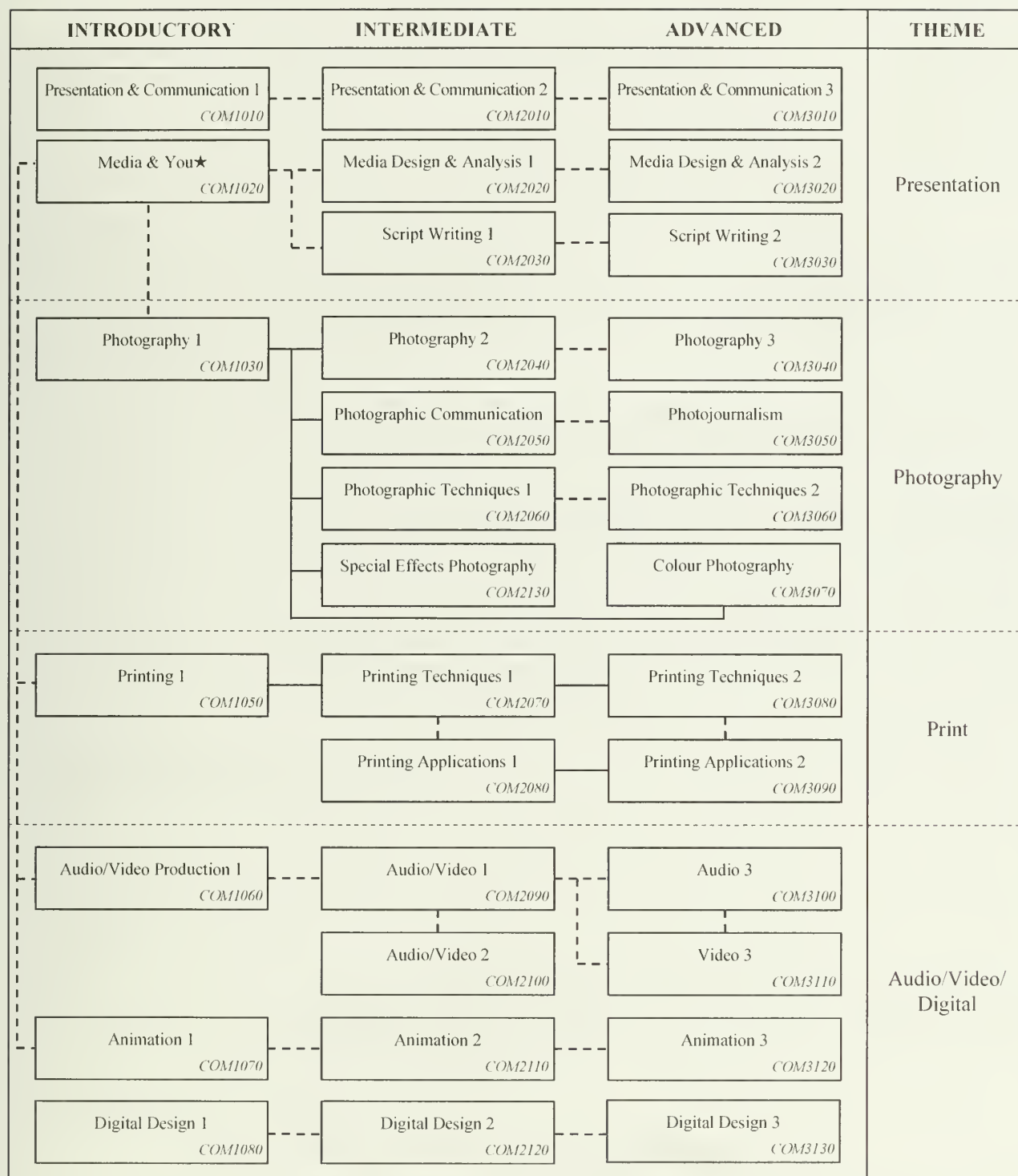
Students need to broaden their horizons to include the latest digital technology as it applies to print, photography, animation, and audio and video production, whether they intend to apply these skills professionally or for their personal use. Communication skills are necessary for the pursuit of a successful career in any field, and communicating effectively using a variety of media gives students an advantage as they enter the information age of the 21st century.

Within the philosophy of Career and Technology Studies, *students* in Communication Technology will:

- develop the basic knowledge, skills and attitudes necessary for exploration and pursuit of further training for a career in the communication technology field
- demonstrate an understanding of the various sectors of the industry and of their own potential with respect to job opportunities
- learn how to function in a productive team environment and how to develop individual competence in a creative and imaginative way
- develop a positive self-concept and realistic life goals through exploring personal interests and aptitudes

- develop the ability to function as media and technologically literate citizens, and understand not only the technological factors, but also the social, cultural and global issues that affect the various communication media
- develop expertise in applying creative thinking and enterprising/innovative strategies to problem solving
- develop an appreciation for environmental, safety and ethical issues related to communication technology
- develop an appreciation for local, regional and global contribution to communication technology
- develop a positive attitude toward work ethics, productivity and time management.

## SCOPE AND SEQUENCE



—— Prerequisite

----- Recommended sequence

★ Course provides a strong foundation for further learning in this strand.



## GENERAL OUTCOMES: INTRODUCTORY LEVEL

### COURSE COM1010: PRESENTATION & COMMUNICATION 1

**Level:** Introductory

**Theme:** Presentation

**Prerequisite:** None

**Description:** Students communicate information and ideas through the use of speech, body language and meaningful text, graphics, audio, video and/or animation.

**General Outcomes:** *The student will:*

- describe the basic steps in the presentation process
- apply knowledge of the presentation process to communicate information and ideas
- demonstrate effective integration of one or more communication technologies in the presentation process; e.g., text, graphics, audio, video, animation
- evaluate presentations made by self and others, based on steps in the presentation process and effective technology integration
- demonstrate basic competencies.

### COURSE COM1020: MEDIA & YOU

**Level:** Introductory

**Theme:** Presentation

**Prerequisite:** None

**Description:** Students are provided with a hands-on introduction to the various segments of communication studies: presentation and communication, photography, print, and audio/video production.

**General Outcomes:** *The student will:*

- identify and describe current media and materials
- use photographic, print and audio/video equipment to communicate ideas and information
- prepare and deliver a presentation
- demonstrate basic competencies.

## **COURSE COM1030: PHOTOGRAPHY 1**

**Level:** Introductory

**Theme:** Photography

**Prerequisite:** None

**Description:** Students operate a camera to take photographs and produce prints.

**General Outcomes:** *The student will:*

- use various photographic equipment, materials and processes to demonstrate basic photographic skills
- describe and/or use various processing methods; e.g., black and white, colour, digital
- describe the role of photography in society
- demonstrate basic competencies.

## **COURSE COM1050: PRINTING 1**

**Level:** Introductory

**Theme:** Print

**Prerequisite:** None

**Description:** Students are introduced to basic layout/design techniques and to various print reproduction processes; e.g., offset, screen, electrostatic.

**General Outcomes:** *The student will:*

- identify the fundamental characteristics and applications of type, paper and ink
- produce a design/layout
- apply printing techniques in the production of print/graphic projects
- demonstrate basic competencies.



## **COURSE COM1060: AUDIO/VIDEO PRODUCTION 1**

**Level:** Introductory

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students acquire basic production skills through the use of simple audio and/or video equipment and techniques.

**General Outcomes:** *The student will:*

- identify basic audio and video equipment, and demonstrate fundamental set-up procedures
- identify and demonstrate basic audio and video concepts; e.g., camera moves, types of shots, audio mixing, audio set-up
- apply basic project planning skills to audio/video productions
- apply scripting, sound recording, and camera and lighting skills and techniques in completing a production assignment
- demonstrate basic competencies.

## **COURSE COM1070: ANIMATION 1**

**Level:** Introductory

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students are introduced to a variety of animation techniques and are given the opportunity to produce simple animation.

**General Outcomes:** *The student will:*

- identify fundamental concepts of the illusion of movement through animation
- identify and describe at least two animation styles
- describe the techniques used in creating the animation styles
- produce short animation assignments
- demonstrate basic competencies.

**COURSE COM1080: DIGITAL DESIGN 1**

**Level:** Introductory

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students are introduced to the integration of various media: e.g., audio, video, photographic, graphic, for the purpose of producing a multimedia message.

**General Outcomes:** *The student will:*

- identify and describe tools, methods and processes used in digital design
- use specified tools to transfer media elements to and/or from various sources
- design and produce a simple message, using a combination of two or more media
- demonstrate basic competencies.

## GENERAL OUTCOMES: INTERMEDIATE LEVEL

### COURSE COM2010: PRESENTATION & COMMUNICATION 2

**Level:** Intermediate

**Theme:** Presentation

**Prerequisite:** None

**Description:** Students use verbal and nonverbal communication skills to produce and deliver presentations incorporating a variety of media.

**General Outcomes:** *The student will:*

- apply the presentation process to specific audiences in more than one context; e.g., interview, news report, commercial, voice-over
- select and use two or more media and technologies to present ideas and information to different audiences
- evaluate presentations made by self and other students
- demonstrate basic competencies.

### COURSE COM2020: MEDIA DESIGN & ANALYSIS 1

**Level:** Intermediate

**Theme:** Presentation

**Prerequisite:** None

**Description:** Students explore various media and examine their impact on personal, community and national interests.

**General Outcomes:** *The student will:*

- analyze various media messages; e.g., radio, television, photography, print; and describe the impact of the various messages from a personal, community and national perspective
- design and produce simple messages, and communicate them through specified media; e.g., print, audio/video, animation
- demonstrate basic competencies.

**COURSE COM2030: SCRIPT WRITING 1**

**Level:** Intermediate

**Theme:** Presentation

**Prerequisite:** None

**Description:** Students write sample scripts for a variety of media forms.

**General Outcomes:** *The student will:*

- describe various media scripts and their formats
- identify the characteristics of a good script
- identify and use a script writing process in writing sample scripts for a media format assigned by the teacher
- demonstrate basic competencies.

**COURSE COM2040: PHOTOGRAPHY 2**

**Level:** Intermediate

**Theme:** Photography

**Prerequisite:** COM1030 Photography 1

**Description:** Students review and expand on the concepts outlined in COM1030 Photography 1, including composition, exposure, camera operation, image processing, proofing and enlarging.

**General Outcomes:** *The student will:*

- apply exposure principles and composition guidelines in photography assignments
- demonstrate proficiency in the theory and practice of image processing, proofing, enlarging and print display
- demonstrate basic competencies.

## **COURSE COM2050: PHOTOGRAPHIC COMMUNICATION**

**Level:** Intermediate

**Theme:** Photography

**Prerequisite:** COM1030 Photography 1

**Description:** Students use photographic prints, slides or digital images to communicate a message or tell a story.

**General Outcomes:** *The student will:*

- identify and describe storytelling/storyboarding techniques
- produce photographic prints, slides or digital images to communicate a message or tell a story
- develop the narration, music, sound effects or captions to accompany the images
- demonstrate basic competencies.

## **COURSE COM2060: PHOTOGRAPHIC TECHNIQUES 1**

**Level:** Intermediate

**Theme:** Photography

**Prerequisite:** COM1030 Photography 1

**Description:** Students expand photographic concepts by using various lenses and applying depth of field in composition.

**General Outcomes:** *The student will:*

- describe the characteristics of different lenses and their applications
- apply depth-of-field principles to obtain a variety of results in completing photographic assignments
- describe and apply several darkroom and/or digital techniques, including cropping, contrast control, dodging, vignetting and burning in
- demonstrate basic competencies.

## **COURSE COM2070: PRINTING TECHNIQUES 1**

**Level:** Intermediate

**Theme:** Print

**Prerequisite:** COM1050 Printing 1

**Description:** Students are introduced to single-register reproductive printing.

**General Outcomes:** *The student will:*

- prepare visual images for printing by various methods: e.g., offset lithography, serigraphy, relief lock, digital
- prepare various masters; e.g., offset plate, serigraphic stencil, relief lockup, digital master
- print an image in register, using one or more methods
- finish printed material as required; e.g., trim, bind, pad, heat
- demonstrate basic competencies.

## **COURSE COM2080: PRINTING APPLICATIONS 1**

**Level:** Intermediate

**Theme:** Print

**Prerequisite:** None

**Description:** Students apply the technique of single-register printing to practical situations.

**General Outcomes:** *The student will:*

- demonstrate practical print-based tasks, using single-register printing, and, by applying previously learned printing techniques:
  - prepare camera-ready copy and masters suitable for the printing task: e.g., offset plate, serigraphic stencil, relief lockup
  - reproduce images in appropriate quantity
  - use finishing techniques as required
- demonstrate basic competencies.



**COURSE COM2090: AUDIO/VIDEO 1**

**Level:** Intermediate

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students expand on basic audio/video production techniques.

**Note:** This course can focus on audio and/or video concepts.

**General Outcomes:** *The student will:*

- complete assignments/projects, using audio/video equipment
- develop skill in using production elements; e.g., lighting, sound, effects
- critique audio/video assignments
- demonstrate basic competencies.

**COURSE COM2100: AUDIO/VIDEO 2**

**Level:** Intermediate

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students enhance production skills through application of preproduction and post-production techniques.

**General Outcomes:** *The student will:*

- apply preproduction, production and post-production techniques to complete an audio/video project
- apply production elements; e.g., lighting, sound, to enhance the production
- apply post-production editing techniques
- demonstrate basic competencies.

**COURSE COM2110: ANIMATION 2**

**Level:** Intermediate

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students build skills in planning, idea development and storytelling techniques, and their application through various animation methods.

**General Outcomes:** *The student will:*

- demonstrate various traditional animation styles, techniques, applications and terminology
- identify and demonstrate principles of animation: e.g., exaggeration, stretch/squash, through project work
- produce a short animation assignment(s) that:
  - develops an idea; e.g., establishes a theme, evokes an emotional response
  - tells a story
- demonstrate basic competencies.

**COURSE COM2120: DIGITAL DESIGN 2**

**Level:** Intermediate

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students enhance their abilities to integrate various media for the purpose of producing a multimedia message for a target audience, using the computer as a significant production tool.

**General Outcomes:** *The student will:*

- design and plan a multimedia message to be communicated to a target audience
- produce and present the message, using two or more media linked through digital technology selected by the student
- evaluate the effectiveness of the message, using an evaluation instrument
- demonstrate basic competencies.

## **COURSE COM2130: SPECIAL EFFECTS PHOTOGRAPHY**

**Level:** Intermediate

**Theme:** Photography

**Prerequisite:** COM1030 Photography 1

**Description:** Students are introduced to the creative use of the camera, the darkroom and/or digital techniques, in order to produce various photographic effects.

**General Outcomes:** *The student will:*

- use the camera shutter and aperture to create basic special effects
- apply darkroom/digital techniques to create different photographic effects
- demonstrate basic competencies.



## GENERAL OUTCOMES: ADVANCED LEVEL

### COURSE COM3010: PRESENTATION & COMMUNICATION 3

**Level:** Advanced

**Theme:** Presentation

**Prerequisite:** None

**Description:** Students refine presentation skills specific to a target audience.

**General Outcomes:** *The student will:*

- prepare presentations for “real” audiences in a variety of contexts; e.g., in class, in school, in community
- prepare presentation materials; e.g., overhead transparencies, charts, graphs, radio/television advertisement, for delivery by self or another presenter
- evaluate a variety of presentations:
  - self and/or peer
  - professional and/or commercial
- demonstrate basic competencies.

### COURSE COM3020: MEDIA DESIGN & ANALYSIS 2

**Level:** Advanced

**Theme:** Presentation

**Prerequisite:** None

**Description:** Students use school and/or community resources to produce messages for a target audience to be delivered through two or more media.

**General Outcomes:** *The student will:*

- identify, select, justify and develop a message for a target audience, using two or more media
- analyze the same message, as delivered through different media
- critique media message/product
- demonstrate basic competencies.

**COURSE COM3030: SCRIPT WRITING 2**

**Level:** Advanced

**Theme:** Presentation

**Prerequisite:** None

**Description:** Students refine script-writing skills by producing scripts for specific media formats.

**General Outcomes:** *The student will:*

- demonstrate knowledge and skill specific to writing scripts for selected formats
- select a format; e.g., long, short, and write a script in that format for a target audience
- demonstrate basic competencies.

**COURSE COM3040: PHOTOGRAPHY 3**

**Level:** Advanced

**Theme:** Photography

**Prerequisite:** None

**Description:** Students apply various light sources, multiple lighting arrangements and metering techniques with an emphasis on flash and studio lighting.

**General Outcomes:** *The student will:*

- identify and describe different camera and film formats
- use different camera and film formats
- apply the theory and operation of light-metering devices and electronic flash devices in a photographic assignment
- apply studio lighting techniques to a photographic assignment
- demonstrate basic competencies.



## **COURSE COM3050: PHOTOJOURNALISM**

**Level:** Advanced

**Theme:** Photography

**Prerequisite:** None

**Description:** Students are introduced to photojournalism.

**General Outcomes:** *The student will:*

- apply knowledge of composition, lighting, exposure and image processing to photographing specified events
- integrate type and photographs to complete a layout
- identify career options in photojournalism
- demonstrate basic competencies.

## **COURSE COM3060: PHOTOGRAPHIC TECHNIQUES 2**

**Level:** Advanced

**Theme:** Photography

**Prerequisite:** None

**Description:** Students create special photographic effects through a variety of approaches, including advanced enlarging techniques, high contrast derivations, toning, retouching and print presentation.

**General Outcomes:** *The student will:*

- use enlarging techniques to achieve a variety of photographic effects
- use retouching techniques to enhance visual quality and/or to achieve different special effects with photographic prints
- alter/convert continuous tone black and white prints through the use of colour and through the use of high contrast materials and techniques
- demonstrate basic competencies.

**COURSE COM3070: COLOUR PHOTOGRAPHY**

**Level:** Advanced

**Theme:** Photography

**Prerequisite:** COM1030 Photography 1

**Description:** Students are introduced to colour photography.

**General Outcomes:** *The student will:*

- identify and describe the additive and subtractive colour processes
- identify and describe the differences between negative and reversal photographic materials
- expose and process negative and/or reversal films and paper
- critique completed photographs
- demonstrate basic competencies.

**COURSE COM3080: PRINTING TECHNIQUES 2**

**Level:** Advanced

**Theme:** Print

**Prerequisite:** COM2070 Printing Techniques 1

**Description:** Students are introduced to multiregister reproductive printing.

**General Outcomes:** *The student will:*

- prepare visual images for printing in at least two colours
- prepare masters required to print images in at least two colours: e.g., offset plate, serigraphic stencil, relief lockup
- print an image in register
- use finishing techniques, as required
- demonstrate basic competencies.

**COURSE COM3090: PRINTING APPLICATIONS 2**

**Level:** Advanced

**Theme:** Print

**Prerequisite:** COM2080 Printing Applications 1

**Description:** Students apply the technique of multiregister printing to practical situations.

**General Outcomes:** *The student will:*

- demonstrate a practical print-based task, applying previously learned techniques
- select a suitable printing method, prepare masters suitable for the printing task; e.g., offset plate, serigraphic stencil, relief lockup, and reproduce in required quantity
- print images in register
- use finishing techniques as required
- demonstrate basic competencies.

**COURSE COM3100: AUDIO 3**

**Level:** Advanced

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students plan, develop and produce specific audio projects.

**General Outcomes:** *The student will:*

- apply preproduction, production and post-production techniques and strategies to complete an audio project
- use audio equipment and various sound recording techniques to enhance the production
- demonstrate basic competencies.

**COURSE COM3110: VIDEO 3**

**Level:** Advanced

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students plan, develop and produce specific video projects.

**General Outcomes:** *The student will:*

- apply preproduction techniques and strategies to produce a video; e.g., prepare a proposal, treatment/script, timeline, shot list, rehearsal schedule
- apply such production elements as lighting, sound, and special effects to the production
- use such post-production techniques/elements as an edit decision list, narration, sound, music, effects or titles to enhance the production
- present the final product to an audience for feedback
- demonstrate basic competencies.

**COURSE COM3120: ANIMATION 3**

**Level:** Advanced

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students apply production planning techniques to produce animation that tells a story, communicates an idea or message, or creates a mood or theme. Students select and employ traditional animation techniques for the project work.

**General Outcomes:** *The student will:*

- prepare for an animation project; e.g., research, story outline, synopsis, resource requirements, timeline
- select and apply animation techniques to communicate story, idea, theme or mood
- demonstrate basic competencies.

**COURSE COM3130: DIGITAL DESIGN 3**

**Level:** Advanced

**Theme:** Audio/Video/Digital

**Prerequisite:** None

**Description:** Students develop and produce multimedia messages within a common theme and for a client who has an identified target audience. Students select and use a variety of media and justify their selection based on the strengths of the media and appropriateness to the task. Digital technology forms a key link in all project work.

**General Outcomes:** *The student will:*

- identify, select and use relevant digital technology methods and processes for message production
- design, produce and present at least two messages within a theme for a specified client and audience
- combine at least three different media in the production of each message
- justify the selection and use of the media chosen based on strength and appropriateness for message delivery
- devise and use an evaluation tool to determine the effectiveness of message delivery
- demonstrate basic competencies.





# FORESTRY

## B. STRAND RATIONALE AND PHILOSOPHY

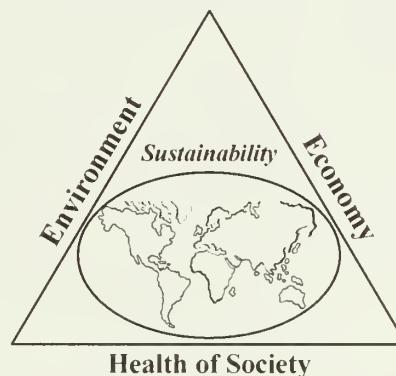
Forests are a source of natural wealth and cover almost two-thirds of Alberta. The resources found on or beneath these public lands contribute to our economy and quality of life. Forested lands in Alberta and Canada provide wildlife habitats, vital watersheds, grazing lands, outdoor recreation and tourism opportunities, and support the development of the forest products industry.

Achieving harmony among the diverse and sometimes competing needs associated with forested lands is an important and continuing task. Through public involvement and a team approach, integrated resource management provides a process for achieving balanced use of forest resources.

Recently, global levels of public concern for forests has expanded to embrace practices that ensure sustainable use of forest ecosystems. Such sustainable use of resources and the environment today will not damage prospects for their continued use by future generations.\*

Forestry, a strand in Career and Technology Studies, will provide opportunities for students to examine the dynamics of forest ecosystems, as well as the many benefits and opportunities associated with forests. Conservation is viewed throughout this strand as a process for managing

human use of the forest environment to ensure such use is sustainable. Students will develop practical knowledge of industry practices that support the integrated and sustainable development of forest resources.



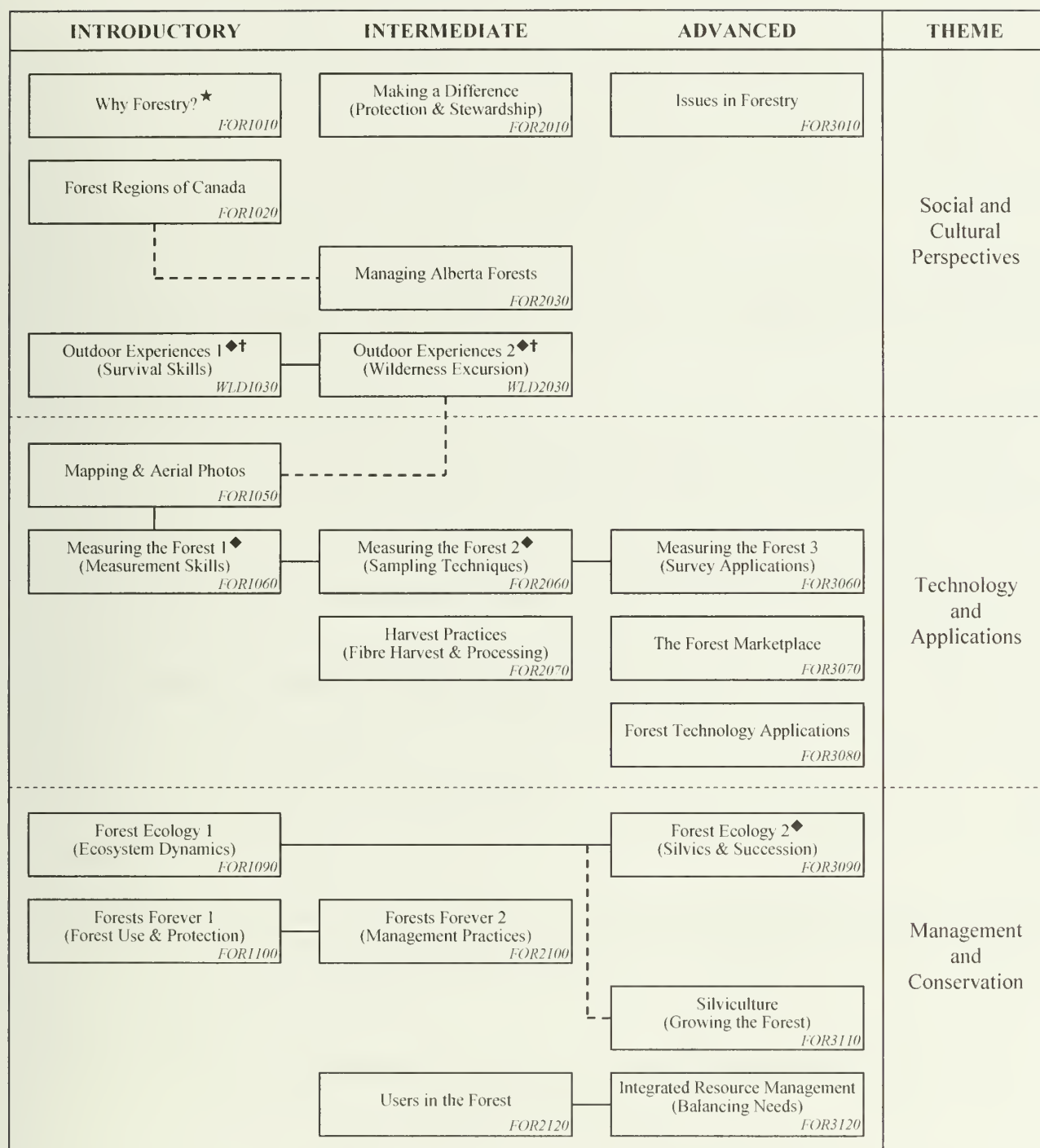
Students in Forestry will develop the knowledge, skills, attitudes, motivation and commitment to work individually and collectively, as private citizens and members of the work force, toward the conservation and responsible use of water, land, air, forests and wildlife. Within the philosophy of Career and Technology Studies, *students in Forestry will:*

- develop greater awareness of the economic, environmental and social significance of the forest resource in Alberta and the rest of the world, and the benefits and costs of resource development

\* Parks Canada and the Canadian Wildlife Service. *The Nature of Canada: A Primer on Spaces and Species*. Ottawa, ON: Environment Canada, 1993.

- describe relationships among production, processing and marketing systems within the forest products industry
- describe technologies and research programs designed to develop, conserve, protect, enhance and sustain the productivity of forested lands
- translate sustainable development and conservation goals into viable plans for managing use of the forest resource
- develop competencies and behaviours that have broad application to environmental career paths, and specific application to careers within Alberta's forest industries.

## SCOPE AND SEQUENCE



—— Prerequisite

----- Recommended sequence

★ Course provides a strong foundation for further learning in this strand.

♦ Refer to specific courses for additional prerequisites.

† Course is also offered in Wildlife.



## GENERAL OUTCOMES: INTRODUCTORY LEVEL

### COURSE FOR1010: WHY FORESTRY?

**Level:** Introductory

**Theme:** Social and Cultural Perspectives

**Prerequisite:** None

**Description:** Students explain the social, economic and environmental significance of forests, describe the impact of individuals on forests, and identify career opportunities in forestry.

**General Outcomes:** *The student will:*

- describe the social, economic and environmental significance of forests
- explain how personal needs, wants, beliefs and actions may influence the forest resource
- identify career opportunities relevant to forestry
- demonstrate basic competencies.

### COURSE FOR1020: FOREST REGIONS OF CANADA

**Level:** Introductory

**Theme:** Social and Cultural Perspectives

**Prerequisite:** None

**Description:** Students identify factors that determine the distribution of forests, as well as research forest regions of Canada with an emphasis on specific species and forest associations found in Alberta.

**General Outcomes:** *The student will:*

- identify factors that determine the type and distribution of forests
- locate and describe the forest regions of Canada
- identify and describe trees that grow in specific regions of Canada and Alberta
- demonstrate basic competencies.

## **COURSE WLD1030: OUTDOOR EXPERIENCES 1 (SURVIVAL SKILLS)**

**Level:** Introductory

**Theme:** Social and Cultural Perspectives

**Prerequisite:** Emergency First Aid (current certification)

**Description:** Students demonstrate basic skills required for responsible participation in a range of outdoor activities.

**General Outcomes:** *The student will:*

- demonstrate knowledge and skills necessary for responsible outdoor experiences
- conduct safe outdoor activities that have minimal environmental impact
- demonstrate basic competencies.

## **COURSE FOR1050: MAPPING & AERIAL PHOTOS**

**Level:** Introductory

**Theme:** Technology and Applications

**Prerequisite:** None

**Description:** Students interpret information from different types of maps and aerial photographs used in the forestry industry.

**General Outcomes:** *The student will:*

- describe different types of maps and aerial photographs used in forestry
- interpret and apply information from maps and aerial photographs
- demonstrate procedures used to create maps
- identify careers in the forest industry relevant to mapping and aerial photography
- demonstrate basic competencies.



## **COURSE FOR1060: MEASURING THE FOREST 1 (MEASUREMENT SKILLS)**

**Level:** Introductory

**Theme:** Technology and Applications

**Prerequisite:** FOR1050 Mapping & Aerial Photos  
Emergency First Aid (current certification)

**Description:** Students demonstrate basic forest measurement skills, and apply these skills to sample fibre values in a forested region.

**General Outcomes:** *The student will:*

- explain the goals and techniques of conducting forest surveys
- demonstrate basic compass and measurement skills used in forest inventory practices
- gather sample data regarding fibre volumes in a forested region
- demonstrate basic competencies.

## **COURSE FOR1090: FOREST ECOLOGY 1 (ECOSYSTEM DYNAMICS)**

**Level:** Introductory

**Theme:** Management and Conservation

**Prerequisite:** None

**Description:** Students investigate forest ecosystems, and explain the structure and functioning of trees.

**General Outcomes:** *The student will:*

- describe interrelationships among elements in the forest ecosystem
- describe structural units of the tree and their function in performing life processes
- demonstrate basic competencies.

## **COURSE FOR1100: FORESTS FOREVER 1 (FOREST USE & PROTECTION)**

**Level:** Introductory

**Theme:** Management and Conservation

**Prerequisite:** None

**Description:** Students describe past and present uses of Canada's forests, and explain how research and technology assist in forest management.

**General Outcomes:** *The student will:*

- describe past and present uses of forests in Alberta and Canada
- explain how the consumptive and nonconsumptive use of forests has created a need for conservation and sustainable management of forested regions
- describe the role of research and technology in forest protection
- demonstrate basic competencies.

## GENERAL OUTCOMES: INTERMEDIATE LEVEL

### COURSE FOR2010: MAKING A DIFFERENCE (PROTECTION & STEWARDSHIP)

**Level:** Intermediate

**Theme:** Social and Cultural Perspectives

**Prerequisite:** None

**Description:** Students analyze the impact of attitudes, actions and lifestyles on forests, and propose individual and shared actions that foster environmental stewardship.

**General Outcomes:** *The student will:*

- describe the impact of personal attitudes, actions and lifestyle on the forest resource
- explain strategies for reducing, reusing and recycling
- demonstrate, through personal and shared actions, commitment to environmental responsibility/citizenship
- demonstrate basic competencies.

### COURSE FOR2030: MANAGING ALBERTA FORESTS

**Level:** Intermediate

**Theme:** Social and Cultural Perspectives

**Prerequisite:** None

**Description:** Students research agencies and structures used to manage forested lands in Alberta.

**General Outcomes:** *The student will:*

- explain how Alberta's forested lands are managed
- describe government legislation and policies that influence the use of Alberta's forest resource
- explain methods of allocating land and timber in forest management
- demonstrate basic competencies.

## **COURSE WLD2030: OUTDOOR EXPERIENCES 2 (WILDERNESS EXCURSION)**

**Level:** Intermediate

**Theme:** Social and Cultural Perspectives

**Prerequisite:** WLD1030 Outdoor Experiences 1 (Survival Skills)  
Emergency First Aid (current certification)

**Description:** Students plan, prepare for and conduct an extended outdoor wilderness trip.

**General Outcomes:** *The student will:*

- present a plan for an extended outdoor wilderness trip
- conduct and conclude, safely, an extended outdoor wilderness trip with minimal impact on the environment
- demonstrate basic competencies.

## **COURSE FOR2060: MEASURING THE FOREST 2 (SAMPLING TECHNIQUES)**

**Level:** Intermediate

**Theme:** Technology and Applications

**Prerequisite:** FOR1060 Measuring the Forest 1 (Measurement Skills)  
Emergency First Aid (current certification)

**Description:** Students research current forest inventory practices, and demonstrate appropriate strategies for sampling the fibre and nonfibre values of forests.

**General Outcomes:** *The student will:*

- describe random and systematic sampling techniques for gathering information about the forest resource
- gather sample data regarding fibre and nonfibre values in a forested region
- demonstrate basic competencies.

## **COURSE FOR2070: HARVEST PRACTICES (FIBRE HARVEST & PROCESSING)**

**Level:** Intermediate

**Theme:** Technology and Applications

**Prerequisite:** None

**Description:** Students research the steps involved in harvesting and processing the forest fibre resource.

**General Outcomes:** *The student will:*

- identify major components of a plan for a forest harvest
- describe the mechanics of harvesting trees
- explain techniques used in fibre utilization and product formation
- describe career opportunities relevant to forest harvesting and fibre use
- demonstrate basic competencies.

## **COURSE FOR2100: FORESTS FOREVER 2 (MANAGEMENT PRACTICES)**

**Level:** Intermediate

**Theme:** Management and Conservation

**Prerequisite:** FOR1100 Forests Forever 1 (Forest Use & Protection)

**Description:** Students explain Alberta's forest management goals, and describe the current management practices used to address these goals.

**General Outcomes:** *The student will:*

- explain the goals of Alberta forest management
- identify different types of forest use and the views and values of different users in the forest
- describe sustainable management practices within the context of Alberta's forested lands
- demonstrate basic competencies.

## **COURSE FOR2120: USERS IN THE FOREST**

**Level:** Intermediate

**Theme:** Management and Conservation

**Prerequisite:** None

**Description:** Students identify different forest users, and explain the planning principles used to develop an integrated resource management plan.

**General Outcomes:** *The student will:*

- identify different uses of the forest and the needs of each forest user
- explain principles of multiple and integrated land use
- describe a plan for integrated resource management
- demonstrate basic competencies.



## GENERAL OUTCOMES: ADVANCED LEVEL

### COURSE FOR3010: ISSUES IN FORESTRY

**Level:** Advanced

**Theme:** Social and Cultural Perspectives

**Prerequisite:** None

**Description:** Students analyze current local and global issues in forest management, and demonstrate individual and shared actions that foster environmental stewardship.

**General Outcomes:** *The student will:*

- describe alternatives and consequences associated with current issues in forest management
- compare and contrast issues and trends involving Canada's forests with similar issues and trends in other parts of the world
- demonstrate individual and shared actions that foster the sustainable management of forested regions
- demonstrate basic competencies.

### COURSE FOR3060: MEASURING THE FOREST 3 (SURVEY APPLICATIONS)

**Level:** Advanced

**Theme:** Technology and Applications

**Prerequisite:** FOR2060 Measuring the Forest 2 (Sampling Techniques)

**Description:** Students explain management applications of data collected from a forest survey, and examine the role of technology in current forest inventory practices.

**General Outcomes:** *The student will:*

- explain the applications of forest survey data in resource management
- describe the role of technology in current forest inventory practices
- explain career opportunities relevant to forest measurement
- demonstrate basic competencies.

## **COURSE FOR3070: THE FOREST MARKETPLACE**

**Level:** Advanced

**Theme:** Technology and Applications

**Prerequisite:** None

**Description:** Students describe the range of consumer products and services derived from Canada's forests, and research the production and marketing of these forest products.

**General Outcomes:** *The student will:*

- describe fibre and nonfibre products and services derived from Canada's forests
- explain processes used in developing fibre and nonfibre forest products and services in Canada and Alberta
- identify market trends, and develop a marketing plan for a forest product or service
- explain career opportunities relevant to developing and marketing forest products
- demonstrate basic competencies.

## **COURSE FOR3080: FOREST TECHNOLOGY APPLICATIONS**

**Level:** Advanced

**Theme:** Technology and Applications

**Prerequisite:** None

**Description:** Students examine research and technological applications in the forest industry, and examine changing career opportunities in the forestry sector.

**General Outcomes:** *The student will:*

- describe different areas of forest research presently being conducted in Canada and Alberta
- cite examples of current and emerging technologies used in the forest industry
- explain career opportunities and trends relevant to the forestry sector
- demonstrate basic competencies.

## **COURSE FOR3090: FOREST ECOLOGY 2 (SILVICS & SUCCESSION)**

**Level:** Advanced

**Theme:** Management and Conservation

**Prerequisite:** FOR1090 Forest Ecology 1 (Ecosystem Dynamics) or Biology 20  
Emergency First Aid (current certification)

**Description:** Students investigate the interrelationships among soil, water, air, trees and the environment, and explain how forests change over time as a result of these interrelationships.

**General Outcomes:** *The student will:*

- explain the effects of soil, air and water characteristics on forest ecosystems
- identify factors that determine the presence of tree species and forest ecosystems in particular environments
- explain the process of change in a forest environment
- demonstrate basic competencies.

## **COURSE FOR3110: SILVICULTURE (GROWING THE FOREST)**

**Level:** Advanced

**Theme:** Management and Conservation

**Prerequisite:** None

**Description:** Students demonstrate knowledge of the techniques used to establish, grow and harvest tree crops.

**General Outcomes:** *The student will:*

- describe silviculture and the silvics of Alberta tree species
- demonstrate practices used to establish a stand of trees and manipulate growing conditions to favour particular species
- describe and compare methods of harvesting tree species
- explain career opportunities relevant to silviculture
- demonstrate basic competencies.

## **COURSE FOR3120: INTEGRATED RESOURCE MANAGEMENT (BALANCING NEEDS)**

**Level:** Advanced

**Theme:** Management and Conservation

**Prerequisite:** FOR2120 Users in the Forest

**Description:** Students develop and present an integrated plan for sustainable development of the forest resource.

**General Outcomes:** *The student will:*

- describe basic forest management principles
- develop a plan for sustainable development and integrated use of forested land
- demonstrate basic competencies.

# INFORMATION PROCESSING

## B. STRAND RATIONALE AND PHILOSOPHY

Information Processing, a strand in Career and Technology Studies, represents the study of electronic technologies as they apply to personal use and the business environment.

As we move more rapidly into the information age, it is crucial that students are able to use electronic technologies to access and manipulate information in an efficient manner. Accurate, timely information is the basis for sound decision making and effective communication.

As students build confidence in their understanding of the various information processing tools and procedures, they will be able to transfer their knowledge and skill to a wide range of contexts. They will also be better able to adapt to the continual changes caused by the evolving technologies.

To understand the shift from the *industrial society* toward the *information age*, it is important that a student understands the significance of the current technological development, of how technology affects an individual's daily life and of the impact that technology has on the world of work. Within this perspective, Information Processing provides for the development of:

- a meaningful study of technological trends

- an understanding of the systems that relate in whole or in part to the management of information
- an understanding of the ethical and societal issues concerning technological development and its impact on society
- technological skills and knowledge designed for personal use
- technological skills and knowledge that transfer to other curriculum areas
- technological skills and knowledge required for the world of work.

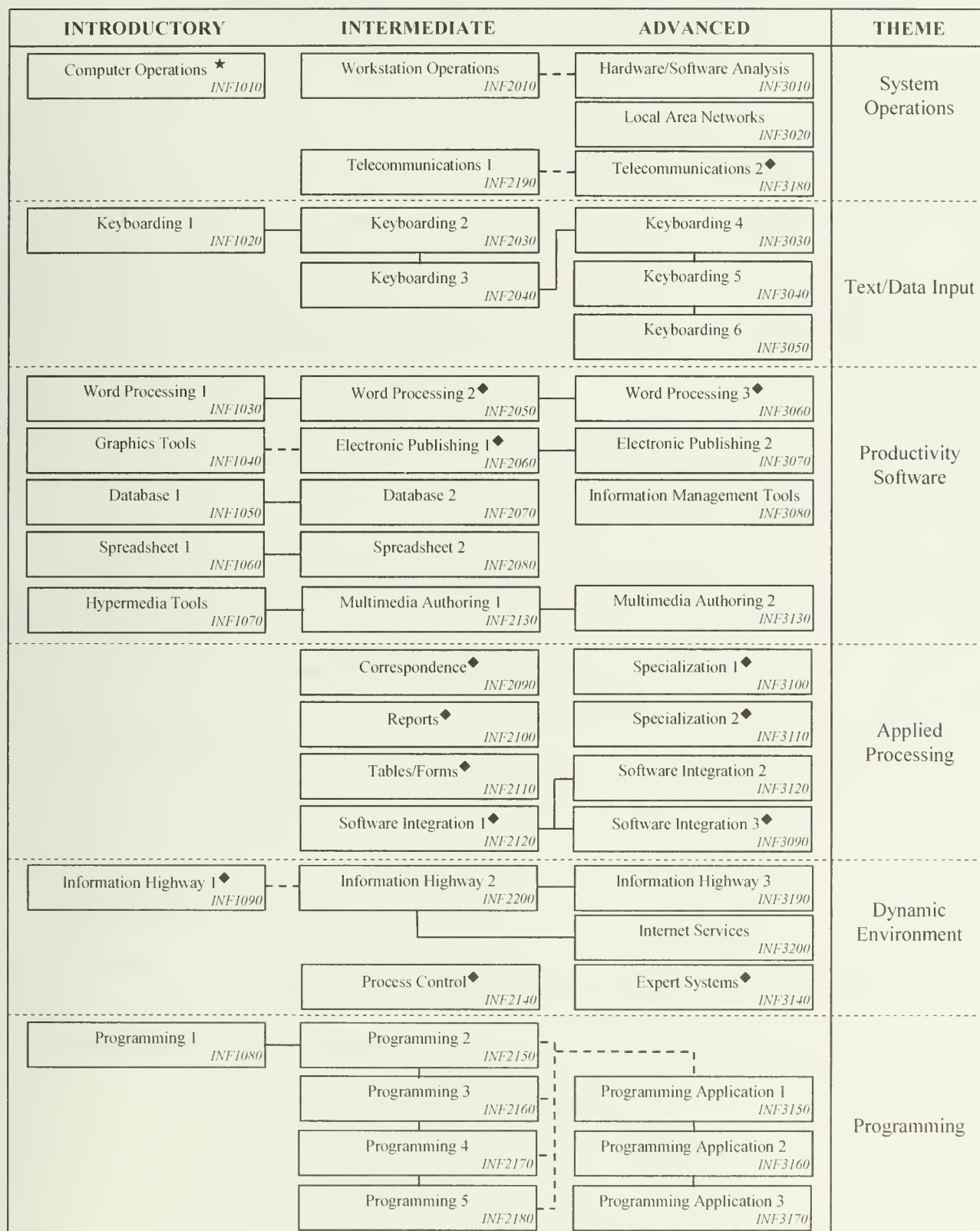
Students will learn to input, process and output information in the following areas:

- system operations
- text/data input
- productivity software
- applied processing
- dynamic environment
- programming (procedure-oriented and object-oriented).





## SCOPE AND SEQUENCE



— Prerequisite

- - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand.

♦ Refer to specific courses for additional prerequisites.



## GENERAL OUTCOMES: INTRODUCTORY LEVEL

### COURSE INF1010: COMPUTER OPERATIONS

**Level:** Introductory

**Theme:** System Operations

**Prerequisite:** None

**Description:** Students develop personal use skills basic to all courses in the Information Processing strand in the following applications: file management, basic hardware and software operations, text entry and workstation routines.

**General Outcomes:** *The student will:*

- demonstrate basic file management skills
- enter text and data, using the proper touch keyboarding technique
- identify components of a computer workstation and basic functions of a computer
- describe one or more recent initiatives or issues in technological development
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

### COURSE INF1020: KEYBOARDING 1

**Level:** Introductory

**Theme:** Text/Data Input

**Prerequisite:** None

**Description:** Students develop accurate touch keystroking of text and data appropriate to personal use and the application of efficient workstation procedures.

**General Outcomes:** *The student will:*

- demonstrate keyboarding competence:
  - text entry at 20 words per minute (wpm)
  - numeric entry at 80 keystrokes per minute (kpm)
  - technique
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF1030: WORD PROCESSING 1****Level:** Introductory**Theme:** Productivity Software**Prerequisite:** None

**Description:** Students develop skill in using basic commands and functions in word processing software, including document editing, and the formatting and printing of reports, correspondence and tables suitable for personal use applications.

**General Outcomes:** *The student will:*

- demonstrate correct use of software functions, by producing mailable, properly formatted:
  - paginated reports with headings and references
  - letters with basic components
  - two-column tables with main headings and subheadings
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF1040: GRAPHICS TOOLS****Level:** Introductory**Theme:** Productivity Software**Prerequisite:** None

**Description:** Students learn the basic commands and functions of computer graphics software, including bitmapped graphics (paint program) and vector graphics (draw program). Students also develop basic skills in manipulating existing graphics, as well as in producing their own graphics.

**General Outcomes:** *The student will:*

- demonstrate the basic elements and principles of design, by using computer software graphics tools to:
  - duplicate graphics designs
  - create graphics layouts
- demonstrate use of software functions
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF1050: DATABASE 1**

**Level:** Introductory

**Theme:** Productivity Software

**Prerequisite:** None

**Description:** Students are introduced to the basic commands and functions of database software, and demonstrate how this software can be used as a personal tool in data and information management.

**General Outcomes:** *The student will:*

- demonstrate basic electronic database software competence, by:
  - creating databases
  - manipulating data and preparing reports
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF1060: SPREADSHEET 1**

**Level:** Introductory

**Theme:** Productivity Software

**Prerequisite:** None

**Description:** Students have an opportunity to use basic functions and commands in spreadsheet software for general data manipulation and personal record keeping.

**General Outcomes:** *The student will:*

- demonstrate basic electronic spreadsheet software competence, by:
  - creating spreadsheets
  - manipulating data and preparing chart graphs
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF1070: HYPERMEDIA TOOLS**

**Level:** Introductory

**Theme:** Productivity Software

**Prerequisite:** None

**Description:** Students develop basic skills with tools used for computerized presentations involving text, data, graphics, sound and animation.

**General Outcomes:** *The student will:*

- demonstrate basic hypermedia software competence, by:
  - accessing hypermedia tools
  - applying hypermedia tools to produce a short presentation
  - using hypermedia tools to edit a short presentation
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF1080: PROGRAMMING 1**

**Level:** Introductory

**Theme:** Programming

**Prerequisite:** None

**Description:** Students are introduced to computer programming languages and a structured programming environment, and they construct algorithms and code instructions to solve identified problems.

**General Outcomes:** *The student will:*

- demonstrate basic computer programming skills, by:
  - creating algorithms to solve problems
  - applying introductory, structured computer coding programming skills
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.



**COURSE INF1090: INFORMATION HIGHWAY 1**

**Level:** Introductory

**Theme:** Dynamic Environment

**Prerequisite:** None

**Description:** Students develop personal use Internet skills for accessing and communicating data and information, with particular emphasis on the world wide web and email.

**General Outcomes:** *The student will:*

- demonstrate knowledge of the history of the Internet and of its basic functions
- demonstrate ability to communicate with others through the Internet
- demonstrate ability to access and report specific information from the world wide web
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.



## GENERAL OUTCOMES: INTERMEDIATE LEVEL

### COURSE INF2010: WORKSTATION OPERATIONS

**Level:** Intermediate

**Theme:** System Operations

**Prerequisite:** None

**Description:** Students learn computer workstation operations, including computer architecture, peripherals, configurations, operating system environments and platforms, utility software, diagnostic and protection software, hard drive file updating and maintenance, support resource application and troubleshooting activities.

**General Outcomes:** *The student will:*

- use file management procedures efficiently
- install and use software to support the integrity of workstation hardware
- configure and maintain workstation hardware
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

### COURSE INF2030: KEYBOARDING 2

**Level:** Intermediate

**Theme:** Text/Data Input

**Prerequisite:** INF1020 Keyboarding 1

**Description:** Students enhance their personal use keyboarding competencies by increasing the rate of accurate touch keystroking of the alphabetic, numeric and selected punctuation keys.

**General Outcomes:** *The student will:*

- demonstrate keyboarding competence:
  - at 30 words per minute (wpm)
  - numeric entry at 100 keystrokes per minute (kpm)
  - technique
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2040: KEYBOARDING 3**

**Level:** Intermediate

**Theme:** Text/Data Input

**Prerequisite:** INF2030 Keyboarding 2

**Description:** Students enhance their keyboarding competencies, by increasing the rate of accurate touch keystroking of alphabetic, numeric and all punctuation keys to support personal use and limited, entry-level, workplace opportunities.

**General Outcomes:** *The student will:*

- demonstrate keyboarding competence:
  - text entry at 40 words per minute (wpm)
  - numeric entry at 120 keystrokes per minute (kpm)
  - technique
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2050: WORD PROCESSING 2**

**Level:** Intermediate

**Theme:** Productivity Software

**Prerequisite:** INF1020 Keyboarding 1  
INF1030 Word Processing 1

**Description:** Students expand their skills in using word processing software commands and functions to produce mailable reports and correspondence, including letters, memorandums and tables, all from rough draft copy.

**General Outcomes:** *The student will:*

- demonstrate correct use of word processing software functions by producing mailable, well-formatted:
  - paginated reports, with headers, footers and title pages
  - letters with special notations in a designated letter style
  - memorandums
  - multicolumn tables with borders and footnotes
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2060: ELECTRONIC PUBLISHING 1**

**Level:** Intermediate

**Theme:** Productivity Software

**Prerequisite:** INF1030 Word Processing 1

**Description:** Students develop skill, using electronic/desktop publishing software to create a variety of camera-ready documents.

**General Outcomes:** *The student will:*

- demonstrate basic electronic publishing software competence, by using page make-up tools and commands to produce camera-ready publications
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2070: DATABASE 2**

**Level:** Intermediate

**Theme:** Productivity Software

**Prerequisite:** INF1050 Database 1

**Description:** Students use all the commands and functions of electronic database software that support effective and efficient database applications.

**General Outcomes:** *The student will:*

- demonstrate advanced level electronic database software competence, by:
  - creating hierarchical and relational databases
  - importing and manipulating data and preparing reports
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2080: SPREADSHEET 2**

**Level:** Intermediate

**Theme:** Productivity Software

**Prerequisite:** INF1060 Spreadsheet 1

**Description:** Students demonstrate advanced level spreadsheet commands and functions to calculate and manipulate data and to prepare appropriate reports and printouts in text and graphic format.

**General Outcomes:** *The student will:*

- demonstrate advanced level electronic spreadsheet software competence, by:
  - creating spreadsheets, including importing data
  - manipulating data and preparing charts
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2090: CORRESPONDENCE**

**Level:** Intermediate

**Theme:** Applied Processing

**Prerequisite:** INF2030 Keyboarding 2  
INF2050 Word Processing 2

**Description:** Students expand their rate of document production as they prepare various forms of correspondence in mailable form, using word processing software.

**General Outcomes:** *The student will:*

- demonstrate efficient word processing of correspondence through the production of:
  - mailable correspondence in a variety of formats under time constraints
  - error-free, well-formatted correspondence
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF2100: REPORTS**

**Level:** Intermediate

**Theme:** Applied Processing

**Prerequisite:** INF2030 Keyboarding 2  
INF2050 Word Processing 2

**Description:** Students expand their rate of production as they prepare various reports and manuscripts in mailable form.

**General Outcomes:** *The student will:*

- demonstrate efficient word processing of reports/manuscripts through the production of:
  - mailable reports in a variety of formats under time constraints
  - error-free, well-formatted reports
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF2110: TABLES/FORMS**

**Level:** Intermediate

**Theme:** Applied Processing

**Prerequisite:** INF2030 Keyboarding 2  
INF2050 Word Processing 2

**Description:** Students expand their rate of document production as they prepare various tables/forms in mailable form.

**General Outcomes:** *The student will:*

- demonstrate competence in word processing of tables/forms, by:
  - producing mailable tables in a variety of formats under time constraints
  - designing a mailable form for a specific purpose and audience
  - editing and formatting tables and forms
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.



## **COURSE INF2120: SOFTWARE INTEGRATION 1**

**Level:** Intermediate

**Theme:** Applied Processing

**Prerequisite:** INF1020 Keyboarding 1  
INF1030 Word Processing 1  
INF1050 Database 1  
INF1060 Spreadsheet 1

**Description:** Students develop document production skills requiring the integration of data, text and graphics.

**General Outcomes:** *The student will:*

- demonstrate word processing and data management systems/graphics software integration competence, by:
  - producing mailable word processing documents that integrate spreadsheet, database and/or graphics in a variety of specific applications
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF2130: MULTIMEDIA AUTHORIZING 1**

**Level:** Intermediate

**Theme:** Productivity Software

**Prerequisite:** INF1070 Hypermedia Tools

**Description:** Students are introduced to multimedia software and provided with an opportunity to develop basic authoring competence, by accessing and integrating software resident text, video and audio clips.

**General Outcomes:** *The student will:*

- demonstrate multimedia authoring competence, by using software resident text, video and audio clips to:
  - use software-specific commands to access and manipulate text video and audio
  - develop a multimedia presentation
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF2140: PROCESS CONTROL**

**Level:** Intermediate

**Theme:** Dynamic Environment

**Prerequisite:** INF1070 Hypermedia Tools

**Description:** Students develop skills in robotics/simulation software control by creating, modifying and using programs that incorporate computer-controlled movements and events in robotics/simulation activities and applications.

**General Outcomes:** *The student will:*

- demonstrate basic electronic process control software competence, by:
  - explaining the theory and processes used to control a robot and/or other simulation
  - constructing a robot or cause a robot to function as intended through computer control
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF2150: PROGRAMMING 2**

**Level:** Intermediate

**Theme:** Programming

**Prerequisite:** INF1080 Programming 1

**Description:** Students increase their programming skills, by designing and generating programming code to handle decision making and repetitive processes.

**General Outcomes:** *The student will:*

- demonstrate basic computer programming skill, by:
  - creating algorithms to solve problems involving decision making and iteration
  - constructing computer programs involving decision making and iterative processes
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2160: PROGRAMMING 3**

**Level:** Intermediate

**Theme:** Programming

**Prerequisite:** INF2150 Programming 2

**Description:** Students increase their programming skills, by using subprogram structures.

**General Outcomes:** *The student will:*

- restructure existing computer programs, by:
  - using subprogram structures
  - revising and constructing computer programs involving subprogram structures
- modify the algorithm to isolate the component operations/processes that were incorporated into the subprogram structure
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2170: PROGRAMMING 4**

**Level:** Intermediate

**Theme:** Programming

**Prerequisite:** INF2160 Programming 3

**Description:** Students increase their programming skills, by developing and using derived data types.

**General Outcomes:** *The student will:*

- demonstrate evolving computer programming skill, by:
  - creating algorithms to solve problems supporting derived data types, such as arrays, character strings, records, sets
  - creating structured programs, using derived data types
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2180: PROGRAMMING 5**

**Level:** Intermediate

**Theme:** Programming

**Prerequisite:** INF2170 Programming 4

**Description:** Students increase their programming skills, by developing and using recursive, sorting and merging algorithms.

**General Outcomes:** *The student will:*

- demonstrate evolving computer programming skills, by:
  - examining/creating different recursive, sorting, searching and merging algorithms
  - revising/creating structured programs containing operations on derived data types
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2190: TELECOMMUNICATIONS 1**

**Level:** Intermediate

**Theme:** System Operations

**Prerequisite:** None

**Description:** Students learn how to select and use various wired and wireless telecommunication systems. By using the Internet, they investigate how communication principles, bandwidth, telecommunication infrastructure and wave spectrum affects telecommunication systems.

**General Outcomes:** *The student will:*

- use selected communication systems, protocols and techniques to transfer messages and manage research
- describe the principles of wired and wireless communication systems and how telecommunication systems are affected by bandwidth and wave spectrum
- compare and contrast key elements of a telecommunication infrastructure
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF2200: INFORMATION HIGHWAY 2**

**Level:** Intermediate

**Theme:** Dynamic Environment

**Prerequisite:** None

**Description:** Students learn how to produce a web page for the Internet.

**General Outcomes:** *The student will:*

- research characteristics of an effective web page
- design, create and present a web page
- enhance web page to improve features and functions
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## GENERAL OUTCOMES: ADVANCED LEVEL

### COURSE INF3010: HARDWARE/SOFTWARE ANALYSIS

**Level:** Advanced

**Theme:** System Operations

**Prerequisite:** None

**Description:** Students analyze, compare and evaluate hardware/software based on user requirements.

**General Outcomes:** *The student will:*

- analyze and compare computer hardware and software systems
- prepare and present a report recommending hardware and software configurations that meet specified criteria
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

### COURSE INF3020: LOCAL AREA NETWORKS

**Level:** Advanced

**Theme:** System Operations

**Prerequisite:** None

**Description:** Students learn about local area network (LAN) computer systems, including hardware and peripheral configurations, interface protocols and data transmission characteristics.

**General Outcomes:** *The student will:*

- demonstrate basic LAN competence, as:
  - a user/operator
  - a manager/technician
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF3030: KEYBOARDING 4**

**Level:** Advanced

**Theme:** Text/Data Input

**Prerequisite:** INF2040 Keyboarding 3

**Description:** Students develop their text and data keyboarding skills to entry-level occupational expectations.

**General Outcomes:** *The student will:*

- demonstrate proficient keyboarding competence:
  - text entry at 50 words per minute (wpm)
  - numeric entry at 150 keystrokes per minute (kpm)
  - technique
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF3040: KEYBOARDING 5**

**Level:** Advanced

**Theme:** Text/Data Input

**Prerequisite:** INF3030 Keyboarding 4

**Description:** Students increase their occupational-level keyboarding competence of text, data and function/service keys, using straight copy and edited material.

**General Outcomes:** *The student will:*

- demonstrate proficient keyboarding competence:
  - text entry at 60 words per minute (wpm)
  - numeric entry at 180 keystrokes per minute (kpm)
  - technique
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.



**COURSE INF3050: KEYBOARDING 6**

**Level:** Advanced

**Theme:** Text/Data Input

**Prerequisite:** INF3040 Keyboarding 5

**Description:** Students enhance their occupational-level keyboarding competence of all keystroke functions, using unedited, edited and straight copy material.

**General Outcomes:** *The student will:*

- demonstrate proficient keyboarding competence:
  - text entry at 70 words per minute (wpm)
  - numeric entry at 200 keystrokes per minute (kpm)
  - technique
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF3060: WORD PROCESSING 3**

**Level:** Advanced

**Theme:** Productivity Software

**Prerequisite:** INF2030 Keyboarding 2  
INF2050 Word Processing 2

**Description:** Students develop occupational-level competence in the use of word processing software commands and functions to produce mailable reports, correspondence and tables, including the importing and merging of text, data and graphics.

**General Outcomes:** *The student will:*

- demonstrate correct use of word processing software functions, by producing mailable, properly formatted copy of:
  - a multipage report with a title page, table of contents, bibliography and appendices
  - two-page letters in designated letter styles that incorporate special formats
  - memorandums
  - tables
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF3070: ELECTRONIC PUBLISHING 2**

**Level:** Advanced

**Theme:** Productivity Software

**Prerequisite:** INF2060 Electronic Publishing 1

**Description:** Students use the functions and commands of electronic/desktop publishing software as they integrate text composing, editing, typesetting, graphics generation and page layout functions to create customized, professional, quality documents.

**General Outcomes:** *The student will:*

- demonstrate electronic publishing software competence, by:
  - creating a customized document effectively incorporating text and graphics to communicate an idea or activity
  - applying software make-up tools and commands
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF3080: INFORMATION MANAGEMENT TOOLS**

**Level:** Advanced

**Theme:** Productivity Software

**Prerequisite:** None

**Description:** Students develop competence in using information management systems software, such as project management, schedules and planners for either personal or workplace applications.

**General Outcomes:** *The student will:*

- demonstrate the ability to use information management software, to:
  - plan projects, including setting goals, timelines and determining resource needs
  - monitor projects, including time and resource management
  - adjust project files, as appropriate
  - prepare project reports
- describe the features of the information management software used
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF3090: SOFTWARE INTEGRATION 3**

**Level:** Advanced

**Theme:** Applied Processing

**Prerequisite:** INF2120 Software Integration 1

**Description:** Students develop high production rates as they process documents from unedited and unformatted copy, using numerous functions/commands to create, revise, format and print a wide range of mailable copy.

**General Outcomes:** *The student will:*

- demonstrate competence in producing multipage documents and presentations that integrate word processing, spreadsheet, database and graphics files/documents, from:
  - unedited copy
  - unformatted copy
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF3100: SPECIALIZATION 1**

**Level:** Advanced

**Theme:** Applied Processing

**Prerequisite:** INF2030 Keyboarding 2  
INF2050 Word Processing 2  
INF2120 Software Integration 1

**Description:** Students specialize in document preparation, terminology application and associated office routine expectations in a specific focus area, such as a medical, legal, petroleum, real estate, insurance, travel/tourism, forestry or agricultural environment.

**General Outcomes:** *The student will:*

- demonstrate basic competence in a specific focus area, by:
  - using appropriate terminology
  - preparing and producing documents
  - exhibiting professional attributes
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF3110: SPECIALIZATION 2**

**Level:** Advanced

**Theme:** Applied Processing

**Prerequisite:** INF3100 Specialization 1  
INF3120 Software Integration 2

**Description:** Students develop workplace competence in a specific focus area, such as medical, legal, petroleum, real estate, insurance, travel/tourism, forestry or agricultural environment, by creating and completing appropriate documents that employ specialized communication skills and conform to workplace expectations and time constraints.

**General Outcomes:** *The student will:*

- demonstrate entry-level workplace competence in a specific focus area, by:
  - using appropriate terminology
  - preparing and producing documents
  - exhibiting professional attributes
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF3120: SOFTWARE INTEGRATION 2**

**Level:** Advanced

**Theme:** Applied Processing

**Prerequisite:** INF2120 Software Integration 1

**Description:** Students expand their document production skills to workplace standards. Documents could require the importing and integration of word processing, spreadsheet, graphics and database files.

**General Outcomes:** *The student will:*

- demonstrate competence in producing documents that integrate word processing, spreadsheet, database and graphics files/documents, from:
  - unedited copy
  - unformatted copy
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF3130: MULTIMEDIA AUTHORIZING 2****Level:** Advanced**Theme:** Productivity Software**Prerequisite:** INF2130 Multimedia Authoring 1**Description:** Students learn to use a multimedia file or multimedia authoring software based on digitized input of text, video and audio clips.**General Outcomes:** *The student will:*

- demonstrate multimedia authoring software and digitized input competence, by:
  - capturing text/images, video and audio information from external sources, and inputting it on a computer
  - using captured text/images, video and audio to create a multimedia presentation
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF3140: EXPERT SYSTEMS****Level:** Advanced**Theme:** Dynamic Environment**Prerequisite:** INF3130 Multimedia Authoring 2**Description:** Students acquire knowledge of expert systems, such as artificial intelligence and virtual reality. They gain competence, by developing or modifying programs that incorporate computer-controlled environments and multimedia interactive activities and applications.**General Outcomes:** *The student will:*

- develop an information portfolio on expert systems and other advanced technologies
- program an application, using one of these systems and present the results
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF3150: PROGRAMMING APPLICATION 1**

**Level:** Advanced

**Theme:** Programming

**Prerequisite:** None

**Description:** Students create programs that use external files.

**General Outcomes:** *The student will:*

- create an algorithm to solve problems requiring an external data file
- develop programs that create, retrieve, append and modify text/nontext files
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF3160: PROGRAMMING APPLICATION 2**

**Level:** Advanced

**Theme:** Programming

**Prerequisite:** INF3150 Programming Application 1

**Description:** Students create a program, using a second programming language.

**General Outcomes:** *The student will:*

- employ existing algorithms to solve programming problems
- create programs to solve problems in a second programming language that include:
  - input/output
  - mathematical functions
  - looping and branching
  - subprogram structures
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.



## **COURSE INF3170: PROGRAMMING APPLICATION 3**

**Level:** Advanced

**Theme:** Programming

**Prerequisite:** INF3160 Programming Application 2

**Description:** Students enhance a program, using a second programming language.

**General Outcomes:** *The student will:*

- create algorithms to solve programming problems
- create programs to solve problems, in a second programming language that include:
  - one- and two-dimensional arrays
  - character strings
  - sort, search and merge operations
  - external data files
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

## **COURSE INF3180: TELECOMMUNICATIONS 2**

**Level:** Advanced

**Theme:** System Operations

**Prerequisite:** INF2190 Telecommunications 1

**Description:** Students demonstrate knowledge of telecommunication systems by designing a new system. They use the Internet in researching and developing their design and for comparing and contrasting various telecommunication initiatives. Students analyze the effect this is having on the individual and society.

**General Outcomes:** *The student will:*

- use appropriate telecommunication systems, protocols and techniques to transfer messages and manage research
- describe how telecommunication systems are evolving, merging and connecting
- design a telecommunication solution that improves communication for an individual, business or society
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.



**COURSE INF3190: INFORMATION HIGHWAY 3**

**Level:** Advanced

**Theme:** Dynamic Environment

**Prerequisite:** INF2200 Information Highway 2

**Description:** Students develop and maintain an Internet/intranet web site that makes use of advanced features.

**General Outcomes:** *The student will:*

- develop a multipage web site to be placed on the Internet or a local intranet
- present and describe to a group, the advanced features of a web site
- maintain and enhance a web site to improve features and functions
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

**COURSE INF3200: INTERNET SERVICES**

**Level:** Advanced

**Theme:** Dynamic Environment

**Prerequisite:** INF2200 Information Highway 2

**Description:** Students expand their skills from INF2200 Information Highway 2, by learning how to operate, maintain and build an Internet/intranet site that may include computer bulletin boards, forums, electronic mail, Internet list servers, and/or moderated newsgroups. Proper use of hardware, software and liaison with users and clients is emphasized.

**General Outcomes:** *The student will:*

- demonstrate competencies to access information from existing electronic messaging systems
- design and create an electronic messaging system
- maintain and enhance an electronic messaging system
- apply, consistently, appropriate workstation routines
- demonstrate basic competencies.

# MANAGEMENT AND MARKETING

## B. STRAND RATIONALE AND PHILOSOPHY

In our highly competitive, rapidly changing society, management and marketing are generic skills. No matter what you do, how you manage yourself or how you use the resources available to you; you market yourself, your services or the products you make.

Management and Marketing, a strand in Career and Technology Studies, is designed to increase students' abilities to apply effective and efficient systems and strategies of management and marketing within personal, family, workplace, community and global contexts. The management aspect of this strand identifies effective procedures for organizing resources and working with people; whereas, marketing is concerned with pricing, promotion and distribution of ideas, products and services to satisfy consumer needs and wants.

Marketing in this strand takes a retail perspective. Linking student experiences as consumers to marketing in the retail marketplace is a central focus in the marketing systems and strategies theme. Through consumer experiences and other business-like activities, students will be asked to focus on marketing through the eyes of a retail worker, manager or owner. Students will learn retail merchandising strategies that help people engaged in marketing meet the challenge of ensuring that the right goods or services are in the

right place, at the right time, in the right quantity, at the right price and offered to the right people.

Management in this strand emphasizes business and information management to generate profit within a competitive environment. Knowledge, skills and attitudes will be developed to help students identify and analyze strategies to succeed when working within continuously changing systems. Students will gain experience and confidence through a wide range of practical experiences as they plan, organize, take action, lead, work cooperatively, monitor progress and communicate. Their goal will be to ensure quality and professional service.

This strand provides an opportunity for students to explore the very complex and continuously expanding study of management and marketing systems and strategies. The intent is to help students develop enough background and skills so that, as entry-level employees, they can make an effective contribution right away. Many of the systems and strategies introduced here lead to further learning and specialization, both through workplace experiences and/or post-secondary study.

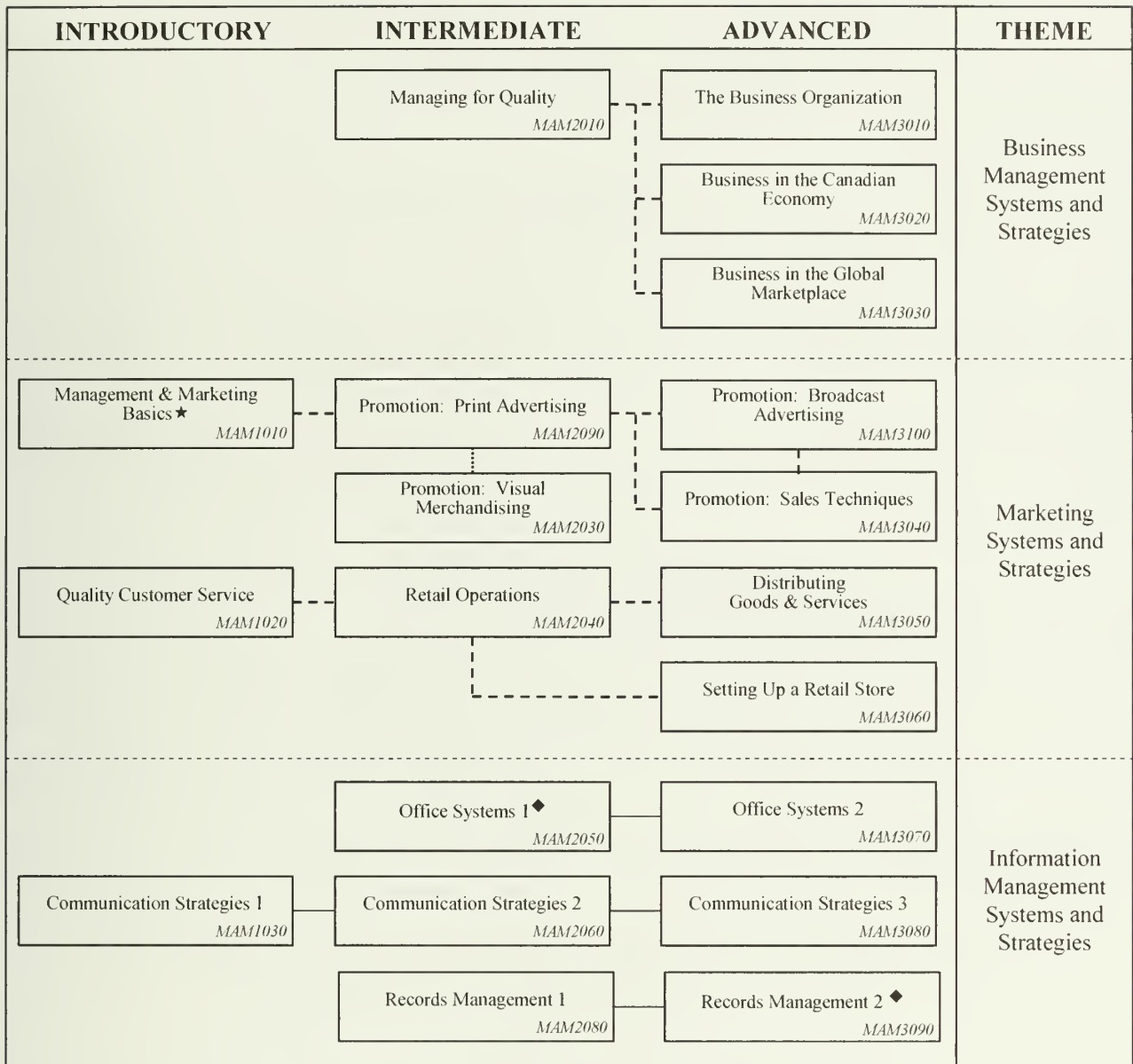
Management and Marketing builds on the Enterprise and Innovation strand competencies. Learning experiences will help students relate

what they already know about how organizations run, how goods are sold and how the economy works. Management and Marketing can help students become aware of and assess a wide range of career opportunities—opportunities in small, medium and large public or private organizations as management and marketing specialists, in related support positions, or as a complement to the technical skills required by people who own and manage their own businesses.

Within the philosophy of Career and Technology Studies, *students* in Management and Marketing *will*:

- identify, analyze, apply and improve systems and strategies related to business and information management and marketing that can be applied personally, throughout CTS and in other study areas
- develop abilities in planning, organizing, leading, monitoring and communicating
- research, analyze, interpret and evaluate information needed in business management, marketing and information management systems and strategies
- develop and apply creative problem-solving and effective decision-making skills within the contexts of business management, marketing and information management systems and strategies
- analyze the role of the individual, family and community as they relate to management and marketing within the Canadian and global economy
- identify areas of interest and talent and relate these to career opportunities in business management and marketing
- demonstrate effort to develop basic competencies.

## SCOPE AND SEQUENCE



- Prerequisite      - - - - Recommended sequence  
 ★ Course provides a strong foundation for further learning in this strand.  
 ♦ Refer to specific courses for additional prerequisites.



## GENERAL OUTCOMES: INTRODUCTORY LEVEL

### COURSE MAM1010: MANAGEMENT & MARKETING BASICS

**Level:** Introductory

**Theme:** Marketing Systems and Strategies

**Prerequisite:** None

**Description:** Students identify basic management and marketing concepts, and describe retail merchandising strategies of value to the retail employee, manager or owner.

**General Outcomes:** *The student will:*

- relate management concepts to:
  - his or her personal life
  - organizations he or she is involved in
  - different types of businesses (large and small)
- describe the characteristics of marketing and decisions made within the marketing mix
- describe the role of retailing:
  - in Canadian history
  - in Canada today
  - in Canada in the future
- identify and analyze retail merchandising strategies used in the marketplace today
- identify management and marketing careers of personal interest
- demonstrate basic competencies.



**COURSE MAM1020: QUALITY CUSTOMER SERVICE**

**Level:** Introductory

**Theme:** Marketing Systems and Strategies

**Prerequisite:** None

**Description:** Students identify and describe the target customer and the selling floor, including sales and nonsales activities.

**General Outcomes:** *The student will:*

- identify and describe:
  - how retailers target their markets
  - a variety of consumer behaviours
- demonstrate effective retail sales/service techniques as:
  - a retail sales clerk and/or service provider
  - cashier
- identify personal interests and opportunities as they relate to careers in retailing
- demonstrate basic competencies.



**COURSE MAM1030: COMMUNICATION STRATEGIES 1**

**Level:** Introductory

**Theme:** Information Management Systems and Strategies

**Prerequisite:** None

**Description:** Students improve oral and written business communication skills necessary for efficient and effective management of information. The focus is on business writing strategies and composing at the computer when preparing memorandums, e-mail messages and business letters.

**General Outcomes:** *The student will:*

- demonstrate use of the writing process when composing correspondence, including:
  - prewriting
  - writing
  - revising
  - proofreading
- demonstrate appropriate ways to deal with callers:
  - face to face
  - on the telephone
- identify personal interests and opportunities as they relate to applying effective communication strategies in career areas
- demonstrate basic competencies.



## GENERAL OUTCOMES: INTERMEDIATE LEVEL

### COURSE MAM2010: MANAGING FOR QUALITY

**Level:** Intermediate

**Theme:** Business Management Systems and Strategies

**Prerequisite:** None

**Description:** Students demonstrate basic managerial skills, by assuming roles and responsibilities of management to coordinate available resources to achieve quality results.

**General Outcomes:** *The student will:*

- identify and outline quality management systems and strategies used to improve quality
- analyze the roles of managers and strategies used by managers to improve quality
- apply management systems and strategies
- identify, through research, a current management system, and describe its effect on the organization
- identify personal interests and opportunities as they relate to careers in management
- demonstrate basic competencies.

**COURSE MAM2030: PROMOTION: VISUAL MERCHANDISING**

**Level:** Intermediate

**Theme:** Marketing Systems and Strategies

**Prerequisite:** None

**Description:** Students identify different types of visual merchandising, and describe how to construct attention-getting displays and how to evaluate visual merchandising.

**General Outcomes:** *The student will:*

- identify and explain basic visual merchandising concepts
- create a collection of visual merchandising ideas for a calendar year
- design and construct a visual merchandising presentation
- evaluate various forms of visual merchandising
- identify personal interests and opportunities as they relate to careers in visual merchandising
- demonstrate basic competencies.

## **COURSE MAM2040: RETAIL OPERATIONS**

**Level:** Intermediate

**Theme:** Marketing Systems and Strategies

**Prerequisite:** None

**Description:** Students identify retail operations that are typically performed off the selling floor, away from customers.

**General Outcomes:** *The student will:*

- identify and report on a particular retailer's policies and practices
- act as a buyer when purchasing goods and demonstrate ordering procedures
- develop a checking, marking and stocking system to use after goods have been received
- verify and process invoices for payment of goods and services received
- describe pricing strategies used by retailers
- demonstrate effective use of systems and strategies to control goods
- identify personal interests related to careers in retail operations, including buying, receiving, stocking, storing and payment of merchandise
- demonstrate basic competencies.

**COURSE MAM2050: OFFICE SYSTEMS 1**

**Level:** Intermediate

**Theme:** Information Management Systems and Strategies

**Prerequisite:** INF1030 Word Processing 1 [Information Processing Strand]

**Description:** Students identify and describe strategies and procedures in the office environment and managing processes and protocols related to electronic equipment, written communication transmittal and business travelling arrangements.

**General Outcomes:** *The student will:*

- conduct an analysis of a selected office environment
- demonstrate use of electronic equipment within office environment(s)
- develop procedures for managing written communication transmittals
- make travel arrangements for a business trip
- identify personal interests related to office careers
- demonstrate basic competencies.

**COURSE MAM2060: COMMUNICATION STRATEGIES 2**

**Level:** Intermediate

**Theme:** Information Management Systems and Strategies

**Prerequisite:** MAM1030 Communication Strategies 1

**Description:** Students improve their basic oral and written communication strategies necessary to efficient and effective management of information. The focus is on technical writing strategies and composing at the computer when preparing informal business reports and proposals.

**General Outcomes:** *The student will:*

- critique informal business reports
- demonstrate use of the writing process: e.g., prewriting, writing, revising, proofreading, when composing business reports or proposals
- deliver an oral report, using effective communication strategies
- demonstrate basic competencies.

**COURSE MAM2080: RECORDS MANAGEMENT 1**

**Level:** Intermediate

**Theme:** Information Management Systems and Strategies

**Prerequisite:** None

**Description:** Students demonstrate basic records management skills for a manual records system, emphasizing alphabetic coding procedures.

**General Outcomes:** *The student will:*

- identify and describe basic filing/records management concepts
- demonstrate ability to organize and use an alphabetic filing/records management system
- identify personal interests and opportunities as they relate to careers in records management
- demonstrate basic competencies.

**COURSE MAM2090: PROMOTION: PRINT ADVERTISING**

**Level:** Intermediate

**Theme:** Marketing Systems and Strategies

**Prerequisite:** None

**Description:** Students are introduced to communication channels, delivery strategies and advertising media that can be used to inform potential customers about products and services available in the marketplace.

**General Outcomes:** *The student will:*

- describe principles involved in the advertising process and apply these principles to print media
- evaluate print advertisements
- design and create an effective print advertisement
- identify personal interests and opportunities as they relate to careers in advertising
- demonstrate basic competencies.





## GENERAL OUTCOMES: ADVANCED LEVEL

### COURSE MAM3010: THE BUSINESS ORGANIZATION

**Level:** Advanced

**Theme:** Business Management Systems and Strategies

**Prerequisite:** None

**Description:** Students identify and describe organizational structures, management theories and organizations as working units. Students also explain their beliefs of what successful organizations might look like in the future.

**General Outcomes:** *The student will:*

- identify and assess local examples of different types of organizational structures
- analyze the different management theories and forecast future trends
- examine the purpose of the following areas in a business organization, and the roles and responsibilities for managers in each of these areas:
  - research and development
  - production
  - finance
  - marketing
  - purchasing
  - administration
  - human resources
- identify why businesses succeed/fail and how organizations measure their success/failure
- evaluate a current challenge facing managers in today's society
- identify personal interests and opportunities as they relate to careers in large organizations
- demonstrate basic competencies.

**COURSE MAM3020: BUSINESS IN THE CANADIAN ECONOMY**

**Level:** Advanced

**Theme:** Business Management Systems and Strategies

**Prerequisite:** None

**Description:** Students expand and relate their knowledge of economics to how business decisions are made within the community, the province, nationally and internationally.

**General Outcomes:** *The student will:*

- identify basic economic terms and concepts
- demonstrate knowledge of the Canadian economy
- identify, describe and evaluate an economic issue challenging Canadian businesses
- demonstrate basic competencies.

**COURSE MAM3030: BUSINESS IN THE GLOBAL MARKETPLACE**

**Level:** Advanced

**Theme:** Business Management Systems and Strategies

**Prerequisite:** None

**Description:** Students identify the opportunities and challenges that confront business people in establishing a global business operation.

**General Outcomes:** *The student will:*

- compare existing international business ventures within developing and developed nations
- identify and examine existing legislation that affects global ventures
- analyze existing global ventures
- identify and investigate global entrepreneurial opportunities within a developing and a developed nation
- demonstrate basic competencies.

## **COURSE MAM3040: PROMOTION: SALES TECHNIQUES**

**Level:** Advanced

**Theme:** Marketing Systems and Strategies

**Prerequisite:** None

**Description:** Students learn techniques for successful selling.

**General Outcomes:** *The student will:*

- critique salespersons and customers during the selling process
- develop and demonstrate proper sales techniques
- identify personal interests and opportunities as they relate to careers in sales
- demonstrate basic competencies.

## **COURSE MAM3050: DISTRIBUTING GOODS & SERVICES**

**Level:** Advanced

**Theme:** Marketing Systems and Strategies

**Prerequisite:** None

**Description:** Students explore the channels of distribution and modes of transportation used to direct goods from the producer to the consumer.

**General Outcomes:** *The student will:*

- identify and compare different channels of distribution and modes of transportation
- identify and describe different types of retailers present in the community
- identify and present the channels of distribution and modes of transportation used for a manufactured product
- identify personal interests and opportunities as they relate to careers in distribution
- demonstrate basic competencies.

**COURSE MAM3060: SETTING UP A RETAIL STORE**

**Level:** Advanced

**Theme:** Marketing Systems and Strategies

**Prerequisite:** None

**Description:** Students develop retail store images, examine potential locations and design store layouts. Students should be given hands-on experience by researching a location for an actual retailing opportunity and design a layout for this retail store. This course focuses on students owning a retail business and learning the necessary steps for success.

**General Outcomes:** *The student will:*

- create an image for a retail business
- analyze and justify a location and site
- design an effective floor plan, using the principles of store design and layout
- identify and select vendors for the purchase of fixtures and equipment
- prepare a maintenance schedule
- demonstrate basic competencies.

**COURSE MAM3070: OFFICE SYSTEMS 2**

**Level:** Advanced

**Theme:** Information Management Systems and Strategies

**Prerequisite:** MAM2050 Office Systems 1

**Description:** Students demonstrate effective office environment strategies and processes, use electronic office equipment, and manage processes related to electronic communications and business meetings.

**General Outcomes:** *The student will:*

- evaluate and make recommendations for improving the quality of the office environment
- demonstrate independent use of office strategies and procedures, and electronic office equipment within office environments
- describe procedures for managing electronic communications
- demonstrate ability to plan and run a business meeting
- demonstrate basic competencies.

## **COURSE MAM3080: COMMUNICATION STRATEGIES 3**

**Level:** Advanced

**Theme:** Information Management Systems and Strategies

**Prerequisite:** MAM2060 Communication Strategies 2

**Description:** Students continue to improve basic oral and written communication strategies necessary to efficient and effective management of information. Focus is on technical writing strategies and composing at the computer when preparing formal business reports and proposals.

**General Outcomes:** *The student will:*

- critique formal technical reports
- prepare a formal technical report that is clear, concise and meets the needs of the report user
- deliver an oral, formal technical report supported by visual aids
- demonstrate basic competencies.

## **COURSE MAM3090: RECORDS MANAGEMENT 2**

**Level:** Advanced

**Theme:** Information Management Systems and Strategies

**Prerequisite:** MAM2080 Records Management 1  
INF1050 Database 1 [Information Processing Strand]

**Description:** Students describe the advantages of an automated records system. Numeric, subject and geographic coding are emphasized.

**General Outcomes:** *The student will:*

- identify and describe basic electronic records management concepts
- demonstrate ability to plan, create and use two of the following electronic records management systems:
  - numeric
  - subject
  - geographic
- demonstrate basic competencies.

**COURSE MAM3100: PROMOTION: BROADCAST ADVERTISING**

**Level:** Advanced

**Theme:** Marketing Systems and Strategies

**Prerequisite:** None

**Description:** Students are introduced to broadcast communication channels, delivery strategies and advertising media that can be used to inform potential customers about products and services available in the marketplace.

**General Outcomes:** *The student will:*

- investigate and report on basic broadcast media types and concepts
- evaluate advertisements for radio and television mediums
- design and create an effective promotional advertisement for each of the following media:
  - television
  - radio
- demonstrate basic competencies.





